SOCIAL SCIENCES

# INDUSTRIAL MEDICINE

Industrial Health, Occupational Diseases and Traumatic Surgery

PUBLIC LIBRARY
MAR 24 1945
DETROIT

March, 1945

**X-Ray Findings of Silicosis**
— Should the Worker Be Informed? —

**Small Plant Industrial Health Program**
— Snap-on Tools Corporation, Kenosha —

**Complete Dislocation of the Knee**
— Unaccompanied by Fracture —

**Psychodynamics**
— In Industrial Medicine and Industrial Nursing —

**Tetryl**
— Effects on the Lungs —

**Rehabilitation of the Handicapped**
— An Outstanding Example —

**Health Education in Industry**
— Effective Persuasion toward Health Behavior —

**Re-employment of Service Men**
— Training Program —

**The Art of Industrial Medical Practice**
— Elements of Its Specialty Status —

**"Hardening"**
— In Industrial Allergic Dermatitis —

**Industrial Medicine in Wartime**
— The Widening Field of Industrial Medical Practice —

**Mental Health**
— The Employee: The Foreman: The Plant Physician —

Volume 14 Number 3

WITH A

## minimum loss of time . .

# ASPIROCAL

by its combined analgesic-antispasmodic action, promotes quick symptomatic relief in headache, neuralgia, dysmenorrhea and general nervousness, as well as in the common cold and influenza. Aspirocal complies with the requirements for an ethical, non-narcotic therapeutic agent as evidenced by its formula—

**EACH TABLET ASPIROCAL COMP. CONTAINS:**

Acid Acetylsalicylic . . . . . 4 gr.
Calcium Gluconate . . . . . 2 gr.
Butisol (5-ethyl-5-secondary butyl barbituric acid 'McNeil') . . . . . ⅓ gr.

Being strictly a prescription product, Aspirocal enables the physician to keep symptomatic relief of pain under his constant supervision.

*Aspirocal is supplied in bottles of 100, 500 and 1000 tablets.*

We will be pleased to send clinical samples of Aspirocal to physicians on their request.

●

CAUTION: Use only as directed

**McNeil Laboratories**
INCORPORATED
PHILADELPHIA • PENNSYLVANIA

● The exclusive J & J free flap feature permits easy, immediate, speedy unwrapping—with no danger of dropping the bandage. The wrapper is wider than the bandage, protecting the neat, even edges and surface of the gauze.

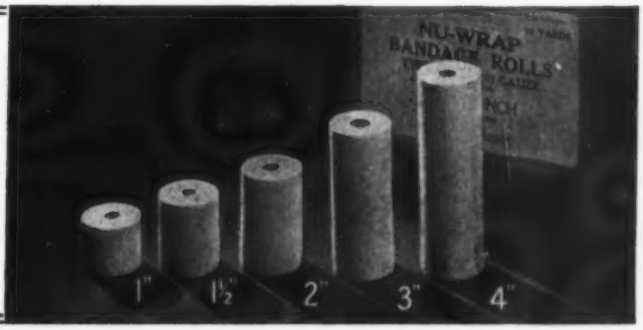
## NU-WRAP BANDAGE ROLLS

ORDER FROM YOUR DEALER

Johnson & Johnson

NEW BRUNSWICK, N. J. CHICAGO, ILL.

*Trade mark of product made exclusively by Johnson & Johnson



# New Processes, New Chemicals, New Workers and PRURITUS

WITH the advent of new reagents and new synthetic compounds, and the large number of new employees, many types of dermatoses can be anticipated in modern industrial plants. As compounds are created, and before immunity can be developed, sensitivity will be apparent in many workers. To tide these patients over their "immunizing" period, Calmitol provides invaluable aid. Its specific antipruritic properties dependably control the pruritus of industrial dermatoses. It permits of tissue rest since it obviates the need for scratching, hence encourages maximal speed of recovery. With an ever increasing number of industrial physicians, Calmitol is the antipruritic of choice.

## CALMITOL
### THE DEPENDABLE ANTI-PRURITIC

The active ingredients of Calmitol are camphorated chloral, menthol and hyoscyamine oleate in an alcohol-chloroform-ether vehicle. Calmitol Ointment contains 10 per cent Calmitol in a lanolin-petrolatum base. Calmitol stops itching by direct action upon cutaneous receptor organs and nerve endings, preventing the further transmission of offending impulses. The ointment is bland and non-irritating, hence can be used on any skin or mucous membrane surface. The liquid should be applied only to unbroken skin.

*Thos. Leeming & Co. Inc.*

155 East 44th Street • New York 17, New York

# MEDICINE SURGERY

INDUSTRIAL HEALTH
OCCUPATIONAL DISEASES
TRAUMATIC, INDUSTRIAL

INDUSTRIAL HYGIENE
INDUSTRIAL MEDICINE
& RAILROAD SURGERY

Industrial Medicine | Volume 14 | MARCH, 1945 | Number 3 | Industrial Medicine


## This Month


INDUSTRIAL Rehabilitation ..... *D. G. Rigeron, M.D.* 173
—Of the Handicapped
PSYCHODYNAMICS ..... *Christopher Legge, M.D.* 177
—In Industrial Medicine and Industrial Nursing
SMALL PLANT Industrial Health Program ..... *H. V. Erickson* 184
—Snap-on Tools Corporation
(With *C. E. Pechous, M.D.*)
COMPLETE Dislocation of the Knee ..... *Colonel Willis W. Lasher* 188
—Unaccompanied by Fracture
EFFECTS of Tetryl ..... *Harold S. Hatch, M.D.* 189
—On the Lungs
(With *Major E. W. Probst*)
SILICOSIS in X-Ray Findings ..... *L. E. Hamlin, M.D., F.A.C.S.* 190
—Should the Worker Be Informed?
HEALTH Education in Industry ..... *Frank M. Gatto, M.D.* 192
—Effective Persuasion toward Better Health Behavior
RE-EMPLOYMENT of Ex-Service Men and Women ..... 196
—V. Training Program
INDUSTRIAL Medicine in England ..... 198
—(Book Review, by C. O. *Sappington, M.D., Dr.P.H.*)
THE ART of Industrial Medical Practice ..... *Robert H. Cross, M.D.* 200
—Elements of Its Specialty Status
ELECTRICALLY Activated Ergosterol .... *C. H. Traeger, M.D., F.A.C.P.* 202
—Therapeutic Value
*(With Willard H. Squires, M.D., F.A.C.P., Emmanuel Rudd, M.D.)*
INDUSTRIAL Medical Practice Looks Ahead ..... 209
—Leaders Meet in Chicago
EDITORIAL ..... 210
"HARDENING" ..... *Samuel M. Peck, M.D.* 214
—In Industrial Allergic Dermatitis
(With *James Q. Gant, M.D.*, and *Louis Schwartz, M.D.*)
INDUSTRIAL Medicine in Wartime
The Widening Field of Industrial Medicine .... *R. T. Johnstone, M.D.* 224
How May a Worker Receive Medical Care? .... *A. C. Dick, M.D.* 226
Tuberculosis in Industry ..... *Howard W. Bosworth, M.D.* 230
Venereal Disease Control ..... *Harold T. Castberg, M.D.* 232
Dentistry in Industry .. ..... *Hugo M. Kulstad, D.D.S.* 234
The Treatment of Soft-Tissue Injuries of the Hand ..... 236
Industrial Urologic Injuries ..... *Alexander H. Peacock, M.D.* 238
Hand Fractures in Industry ..... *C. C. Cutting, M.D.* 242
INDUSTRIAL HEALTH and DISEASE:
Industrial Medicine ..... *C. F. Yeager, M.D.* 244
—And the General Practitioner
Industrial Mental Health ..... 250
—Round Table: American Psychiatric Association
Personal ..... 8 Comment and Opinion .. 22
General ..... 12 Dr. Pilgrim ..... 213
Current Articles of Quality ..... 46, 260


HAZEL HURST, herself blind, and head of the Hazel Hurst Foundation at Pasadena, California, where blind people are educated for placement in industrial work, suggests that these people do not wish to be called "handicapped," but would rather refer to their blindness as being one of the many limitations which are experienced in some manner or other by practically everybody. The whole characterization is a matter of degrees; if a man with only one arm or one leg is handicapped so is the man who can't see to read without his glasses. MISS HURST'S suggestion should be generally adopted, particularly with reference to the war wounded who are going to become very tired, if they are not already so, of the term "handicapped." If their limitations must be referred to, speak of them as *limitations*. . . . FROM time to time our "Comment and Opinion" section contains a small assembly of "Punch Lines." These have been gathered from sources outside of the magazine. This month, however, there are a good many punch lines right here, and some of them pack a real wallop. For example, the question in the report of DR. LAMB'S talk (page 24), "What shall we do with men deteriorating in their line of duty?" How many there are! How long it has been since a fair day's work for a fair day's pay was considered a standard in employment! DR. LAMB probably did not have this in mind; it is suggested here by the many respects other than medical in which deterioration is apparent, as may be gathered in any day's news. . . . AND from MR. ERICKSON'S article (page 188): "Snap-on Tools Corporation has proved to itself at least that small industry can have a good health program. The good will and labor-management relationship is worth a lot more than can be measured in a monetary

*—Continued on page 6.*


INDUSTRIAL MEDICINE, The Journal of Industrial Health, Occupational Diseases and Traumatic Surgery. Entered as second class mail matter August 28, 1941, at the Post Office at Chicago, Illinois, under the Act of March 3, 1879. Published on the fifth of each month by INDUSTRIAL MEDICINE PUBLISHING COMPANY, Chicago. STEPHEN G. HALOS, President; A. D. CLOUD, Publisher; C. O. SAPPINGTON, M.D., DR. P.H., Editor; CHARLES DRUECK, JR., Secretary and Treasurer; STEPHEN G. HALOS, Advertising and Business Manager. PUBLICATION, EDITORIAL and EXECUTIVE Offices: 605 North Michigan Avenue, Chicago, Illinois. Subscription $5.00 per year in the United States; $5.50 per year in Canada; $6.00 per year in other countries. Single copies 50 cents. Title Registered in United States Patent Office.


Copyright, 1945, by Industrial Medicine Publishing Company, Chicago.


Eastern Representative, H. GORDON HUNTER, 152 West Tenth Street, New York City, Telephone Watkins 9-1067.

CHANGE OF ADDRESS:

Four weeks' notice required; changes cannot be made without old address as well as new; please furnish postal zone number for new address if city requires it.

**INDUSTRIAL MEDICINE is regularly indexed in "The Industrial Arts Index," which can be found in any Public Library.**


AAIP&S: Chicago meeting with AMA....209
participation, ASHA meeting..... 12
Western Association ..... 10
Absenteeism: midnight curfew, effect of... 22
psychological problem .....182
Albee, Dr. Fred H., death..... 10
AMA, Council on Industrial Health.....209
Army Industrial Hygiene Laboratory.....208
Arthritis, treatment with ergosterol.....202
Auenbrugger, Leopold ..... 56
Barnes, Edgar C., award..... 8
Bartle, Dr. Harvey, retirement..... 8
Benefit plans, sickness..... 20
Bladder injuries .....240
Blind, employment of.....173
Bosworth, Dr. Howard W. (author).....230
Brain injury, convulsions..... 32
Brown, Dr. Bruce M., appointment..... 8
Brown University, course..... 24
Buelow, Dr. Robert C., appointment..... 10
California, health plan..... 16
Cardiac diseases, discovery of percussion.. 56
Castberg, Dr. Harold T. (author).....232
Chicago Society of Industrial M. & S..... 10
Cold vaccines, value..... 36
Colds, virus, as a cause..... 22
Cross, Dr. Robert H. (author).....200
Cutting, Dr. C. C. (author).....242
Davis, Dr. George, to Alaska..... 10
Dentistry, in industry.....234
Dermatitis: hardening .....214
lemon powder ..... 20
potatoes, cause of..... 18
resins .....218
tetryl .....218
TNT .....218
Dick, Dr. A. C., resignation..... 8
(author) .....226
Dislocation, of the knee.....188
Dressings, surplus, value..... 34
Dr. Pilgrim .....213
Eadie, Dr. Gordon A., discussion.....254
Education: cooperation with industry..... 28
health, in industry.....192
health, responsibility .....212
rehabilitation of veterans.....197
Employee efficiency ..... 32
Engel, Dr. Charles F., award..... 8
England: health plan..... 24
industrial medicine in.....199
Ergosterol, value, in arthritis.....203
Erton (ergosterol) .....202
Erickson, H. V. (co-author).....184
Examinations, periodic, value (Kuh)..... 52
Eyesight, in workers, classification..... 36
Flight surgeons, attitude..... 28
Foreman contacts .....256
Fountain, Clayton W., discussion.....249
Fractures, hand .....242
Gant, Dr. James Q. (co-author).....214
Gatto, Dr. Frank M. (author).....192
General Electric Company, health service.. 40
Germany, medicine in..... 36
G.I. Bill of Rights.....248
Government: job counselors..... 44
lighting in offices..... 38
Hamlin, Dr. L. E. (author).....190
Hand: fractures in industry.....242
injuries, soft-tissue .....236
Handicapped: job training.....177
rehabilitation, Walter Kidde & Co.....173
Hardening in industrial dermatitis.....214
Hatch, Dr. Harold S. (co-author).....189
"Health Education—Whose Responsibility?"212
Health insurance, administration, England 24
Health plans, California..... 16
Heat, limits of toleration..... 34
Himler, Dr. L. E., discussion.....256
Hussey, Dr. Raymond, appointment..... 8
Hygiene, advance of..... 22
Iceland, medical education..... 16
Industrial: accidents, responsibility.....177
hazards, in war plants..... 50
hazards, noise ..... 31
Industrial health: Brown University Course 24
dentistry, place in.....234
proposed act ..... 38
Southern Medical Association..... 10
twenty-five years ago.....208
Industrial health programs, small plant...184
IHF, veteran rehabilitation, panel..... 46
Industrial Hygiene, services..... 20
Industrial injuries: hand, soft-tissue.....237
urologic .....238
Industrial medicine: as a specialty.....228
in England, book review.....199
labor and management cooperation.....201
labor relations .....246
legal aspects .....199
practice, art of.....200
phychodynamics of .....177
widening field .....224
Industrial nurse, importance.....180
Industrial safety, charts..... 18
Injuries: brain, surgery as a cure..... 32
urologic, in industry.....238
hand, soft tissue.....236
fractures, hand .....242
Job placement, Walter Kidde & Co.....175
Johnstone, Dr. Rutherford T. (author)....224
Kidney injuries .....238
Knee, complete dislocation.....188
Kuh, Dr. Clifford, discussion..... 52
Kulstad, Dr. Hugo M. (author).....234
Labor: and industrial medicine.....248
cooperation .....201
place in industrial health.....250
Lasher, Colonel Willis W., (MC) (author).188
Legal aspects: industrial medicine.....199
lemon powder poisoning, verdict..... 20
Leggo, Dr. Christopher (author).....177
Lemon powder, poisoning..... 20
Lighting, in government offices, poor..... 38
Markuson, Dr. Kenneth E., discussion....258
McMahon, John F., IHF panel..... 46
Medical care, adequacy, in-plant, out-plant.226
Medical service: postwar demand..... 36
provided by corporations..... 44
small plant (Snap-on Tools Corp.).....185
Medicine, in Hitler Germany..... 38
in Iceland ..... 17
and the changing order..... 40
Mental disorders, percentage in employees 22
Mental health: emotionally maladjusted...181
Federal job counselors..... 44
foreman contacts .....256
labor's place .....250
role of physician in.....258
veterans', in industry.....254
wartime deterioration ..... 28
Morse, Kenneth M., appointment..... 8
Neurosis: government classification..... 44
wartime strains ..... 24
New England Conference, Boston..... 16
New Jersey AAIP&S, meeting..... 12
New York Academy of Medicine, report... 40
Noise, industrial menace..... 30
Nurses, in war, Philippines..... 54
Nutrition, education in industry.....194
Pacific Industrial Hygiene Foundation.... 20
Patch tests, in dermatitis.....216
Peacock, Dr. Alexander H. (author).....238
Pechous, Dr. C. E. (co-author).....184
Peck, Dr. Samuel M. (co-author).....214
Percussion, discovery ..... 56
Periodical examinations, proper procedure.179
Physician: and industrial medicine.....200
general, and industrial medicine.....244
industrial, essentiality .....200
industrial, high death rate..... 12
role in mental health.....258
Pre-placement examinations: health.....246
for handicapped .....175
proper procedure, philosophy.....178
Potatoes, dermatitis ..... 18
Preventive medicine, failure.....195
Probst, Major E. W., (MC) (co-author)..189
Psychiatry, failings .....260
Psychodynamics of industrial medicine....177
Psychology: in industrial medicine.....177
in absenteeism .....182
forman contacts .....256
of worker .....250
Psychosomatic medicine: in industry.....282
government ..... 44
value ..... 32
Records, necessity of.....183
Rehabilitation, veteran, programs..... 22
Resins, as cause of dermatitis.....218
Rhode Island, cash benefit plan unsound... 20
Rigeron, Dr. D. G. (author).....173
Rudd, Dr. Emmanuel (co-author).....202
Safety chart series..... 18
Sappington, Dr. C. O.: book review.....199
speech (editorial) .....210
Schwartz, Dr. Louis (co-author).....214
"Security vs. Self-Reliance".....210
Selby, Dr. C. D., IHF Panel..... 46
Sickness benefit plans, Rhode Island..... 20
Silicosis, advisability of telling worker....190
Squires, Dr. Willard H. (co-author).....202
Surgeons, flight, attitude..... 28
Surplus material, dressings..... 34
Tetryl: dermatitis, hardening.....219
effects on the lungs.....189
"Tip to Executives".....210
TNT, dermatitis, hardening.....221
Traeger, Dr. Cornelius H. (co-author)....202
Training, veteran, in industry.....196
Tuberculosis in industry.....230
Urethra, injuries .....242
Urologic injuries in industry.....238
Vaccines, cold, value..... ???
Venereal disease control in industry.....232
Veterans' Administration: contact with...248
place in training program.....196
Veteran re-employment, training program.196
Veteran rehabilitation: Eastern Aircraft.. 46
Ford Motor Co. (Krieger)..... 46
General Motors, experience..... 52
IHF panel ..... 46
in industry .....197
Westinghouse (Streets) ..... 50
Walter Kidde & Co., handicapped.....173
Wayne University, medical service..... 8
White, Dr. J. A., appointment..... 8
"Who Loves His Fellow Men".....210
"With Profit, But Not for Profit".....213
X-rays, silicosis, reading of.....191



By special arrangement—for the benefit of those who have not yet added this indispensable volume to their library of quick reference—we are now able to offer McNally's Toxicology at $5.00 per copy.

This is the same 1,000-page textbook that sold at $10.00 a copy when it was published several years ago, and it is still the outstanding compendium of toxicological information of all kinds—no other work of its scope and detail has yet been produced.

Cyclopedic in size, all-inclusive in range, meticulous in description, thoroughly documented (more than 2,000 references) and carefully indexed, this book is the authoritative source of toxicological data. It is invaluable to everyone interested in toxicological problems.

It embraces etiology—symptoms—diagnoses — treatments — analyses —tests, chemical and biological—methods of detection—fatal dose—fatal period—deposition in the body —isolation from the tissues—pathological effects—postmortem appearances—and all others matters and things of whatsoever Medical and Medicolegal importance with reference to Toxicology.

William D. McNally, the author, is well known as one of the country's leading authorities on toxicological subjects.

# TOXICOLOGY

*by* WILLIAM D. MCNALLY, M.D.

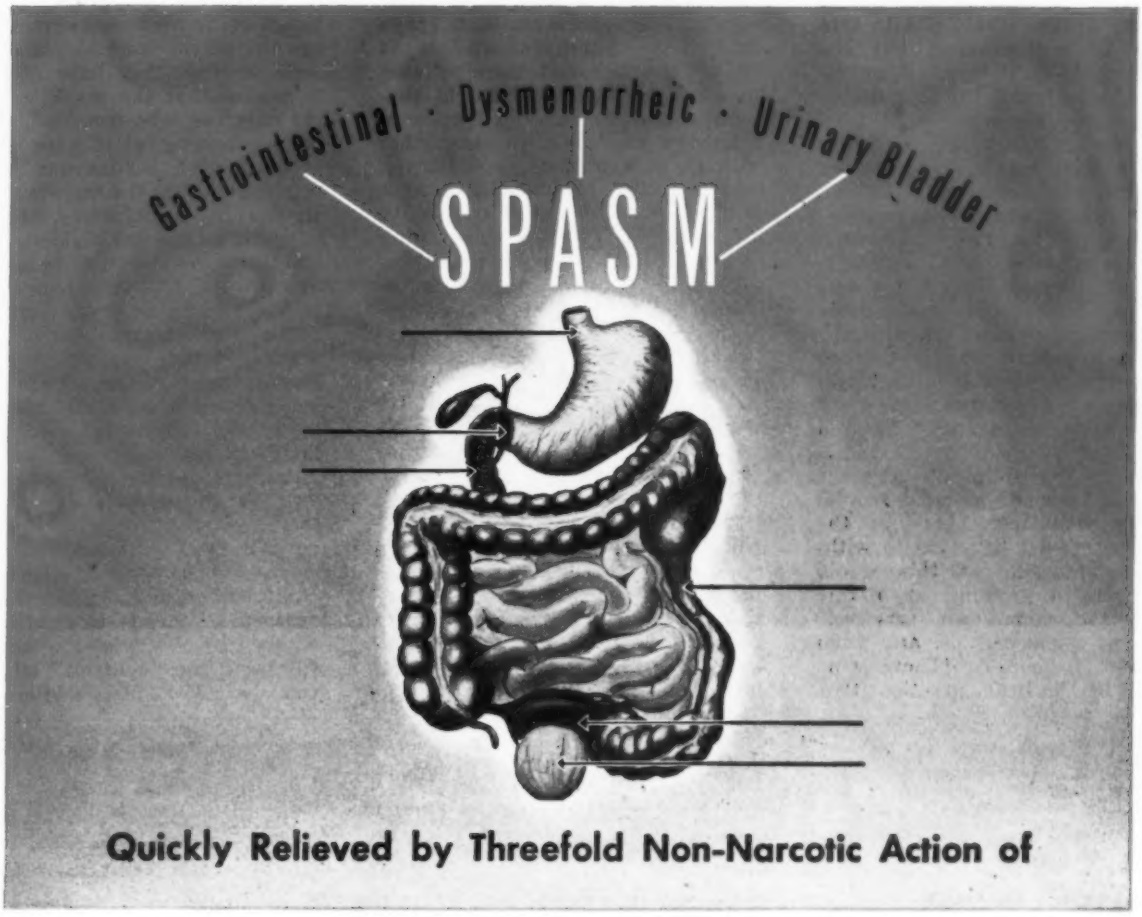
*—A summation of present-day knowledge of Poisons, their origins, properties, physiological action, treatment of their noxious effects, and their detection—*

The number of copies we can offer at this price is limited—so Order Now.

**1022 pages: 65 tables: 39 illustrations—$5.00 postpaid.**

**INDUSTRIAL MEDICINE**

**605 N. Michigan Ave., Chicago, Illinois**




# Pavatrine
## with
# Phenobarbital

The new Searle Research Development—Pavatrine—is unique among spasmolytic agents by reason of its combined *neurotropic* and *musculotropic* actions.

To this has been added the mild, *central nervous sedation* of Phenobarbital to secure effective symptomatic relief in—

**Gastrointestinal spasm (the "irritable bowel")**
**Uterine hypertonicity of dysmenorrhea**
**Urinary bladder spasticity**

Each sugar-coated tablet contains 125 mg. (2 gr.) Pavatrine (Searle) with 15 mg. (¼ gr.) Phenobarbital. Supplied in bottles of 100 and 1000.

G. D. SEARLE & CO., Chicago 80, Illinois

Pavatrine is the registered trademark of G. D. Searle & Co.

SEARLE

RESEARCH IN THE SERVICE OF MEDICINE

—*Continued from page 3.*

manner." Small plant executives, please note. . . . ANOTHER is by DR. HAMLIN (page 191), "All this because of well-meaning, but unconsidered, medical care." Some industrial physicians will consider DR. HAMLIN'S comment quite temperate, to say the least. . . . ONE MORE is from the book review on page 198. In the words of SIR DAVID MUNRO, "Industrial is an overworked adjective. There are some who seem to think that by adding it to a noun they have created a new condition. Such people are capable of diagnosing 'industrial appendicitis' in a patient merely because he happens to work in a factory." That needs no comment. . . . STILL another from DR. DRYSDALE, in "Ten Years Ago" (page 200): "There is always the temptation to ask the lawyer if he would be good enough to state what percentage of the hoped-for verdict he plans to withhold for himself, as this would assist you in arriving at a fair charge for your own services." Again, no comment. . . . AND from DR. CROSS (page 202), "There is no branch of medical practice that taxes the ingenuity of the physician more than this one." He is referring, of course, to industrial medicine. . . . AND from DR. DICK (page 226), "The physician who is in private practice and merely 'takes on a little industrial work' to supplement his income (and I know of not many who do so for any other reason) is a menace to industrial medicine, for his interest is not in it." This calls to mind the classic, if somewhat apocryphal, example in which a witness for the plaintiff—a physician who did "a little industrial work" from time to time—found himself in the position of trying to sustain his diagnosis of the cause of action as "industrial plumbism" on the ground that the plaintiff worked in a lead pencil factory. To such men—and unfortunately they are more than a few in number—the etiology of occupational disease is a closed book. Nevertheless they will assume to conclude that the matter in hand is silicosis, lead poisoning, benzol poisoning, or some other industrially-related condition when in truth they haven't sufficient *real* knowledge. This is expensive, and embarrassing, yet it seems to continue—an idiosyncrasy, perhaps, of the type of mind that will attempt it. . . . AND another, from DR. YEAGER (page 248): "Whereas several years ago the unions were skeptical about such services, they have now come to realize that the employer is not the only one who benefits." A little more polishing, as it were, by way of more such realizations however belated, and—in the rapidly growing structure of satisfactory labor relations—the stone the builders refused will have become "the head of the corner". . . . AND finally, in the quotation cited by DR. MARKUSON (page 260): "Psychiatry suffers from words." Right now it is spewing from indigestion, and each newcomer into the field who "darkeneth counsel by words without knowledge" only increases the violence of the retching. There are many newcomers, for example the psychiatric officers in the services who, in attaining the rank, *assume* the wisdom and experience. Regardless of the already multiplied phraseology, another term ought to be added—to describe those of such officers who are *needlessly* fastening the "neurosis" stigma on wounded and helpless soldiers.


Alkalol Company, The ..... 244
*Alkalol*
Aloe, A. S., Company ..... 16
*"Aloe" Cotton Elastic Bandages*
American Optical Company ..... 13
*AO Color Perception Test*
American Sterilizer Company ..... 47
*Small Instrument Sterilizers*
Ames Company, Inc. ..... 18
*Clinitest*
Anglo-French Laboratories, Inc. ..... 12
*Hepvise*
Baum, W. A., Co. Inc. ..... 20
*Baumanometer*
Bausch & Lomb Optical Company ..... 221
*Safety Eyewear*
Becton, Dickinson & Co. ..... 36
*B-D No. 5008 Manometer*
Bender, Matthew, & Company ..... 240
*"Gray's Attorneys' Textbook of Medicine"*
Bilhuber-Knoll Corp. ..... 24
*Metrazol*
Breck, John H., Inc. ..... 245
*Breck Work Cream*
Bristol-Myers Company ..... 247
*Sal Hepatica*
Burdick Corporation, The ..... 57
*Burdick QA-450 Ultraviolet Lamp*
Burroughs Wellcome & Co. Inc. ..... 15
*'Tabloid' Yeast Concentrate*
Burroughs Wellcome & Co. Inc. ..... 253
*'Tabloid' 'Empirin' Compound*
Cambridge Instrument Company, Inc. ..... 28
*Simpli-Trol Portable Electrocardiograph*
Carbisulphoil Company ..... 217
*'Foille*
Cavendish Pharmaceutical Corp. ..... 250
*Thi-Fer-Heptum*
Cereal Institute, Inc. ..... 249
*Cereal*
Chatham Pharmaceuticals, Inc. ..... 3rd Cover
*Koagamin*
Chaplin Laboratories Inc. ..... 255
*Penicillin*
Chesebrough Mfg. Company, Cons'd ..... 23
*Vaseline*
Ciba Pharmaceutical Products, Inc. ..... 212
*Nuporals*
Ciba Pharmaceutical Products, Inc. ..... 4th Cover
*Nupercaine*
Clapp, Otis, & Son Inc. ..... 55
*Obtundia; Obtundia Cream*
Crookes Laboratories, Inc. ..... 216
*Enzo-Cal*
Denver Chemical Mfg. Company, The ..... 228
*Acetone Test (Denco); Galatest*
Denver Chemical Mfg. Co., The ..... 246
*Antiphlogistine*
Desitin Chemical Company ..... 30
*Desitin Ointment*
Dolge, The C. B., Co. ..... 250
*Dolcowax*
Dome Chemicals, Inc. ..... 48
*Domeboro Tabs; Daxalan; Domolene*
Drug Products Co. Inc., The ..... 46
*Neo-Sulfarea*
Ethicon Suture Laboratories ..... 34
*Ethicon Sutures*
Flint, Eaton & Company ..... 38
*Sulfonamide Preparations*
General Cellulose Co., Inc., The ..... 230
*Fibredown Hospital Rolls*
General Electric X-Ray Corporation ..... 29
*G-E Mobile Chest X-Ray Units*
Health Cigar Co. Inc. ..... 14
*Sano Cigarettes*
Hoffmann-La Roche, Inc. ..... 229
*Imadyl Unction 'Roche'*
Hollings-Smith Co. ..... 231
*Carbex Bell Tablets*
Hynson, Westcott & Dunning, Inc. ..... 218
*Mercurochrome*
Industrial Medicine Book Company ..... 22
*"The Mind of the Injured Man"*
International Cellucotton Products Co. ..... 52
*Booklet, "That Day is Here Again"*
Iodine Educational Bureau, Inc. ..... 220
*Iodine*
Irwin, Neisler & Company ..... 49
*Tabulex Veratrite*
Johnson & Johnson ..... 1
*Nu-Wrap Bandage Rolls*
Johnson & Johnson ..... 251
*Red Cross Plasters*
Keystone View Company ..... 234
*Industrial Visual Safety Tests*
Kny-Scheerer Corporation ..... 248
*Surgical Instruments*
Kolar Laboratories, Inc. ..... 252
*Protective Cream; Skin Cleanser*
Leeming, Thos., & Co. Inc. ..... 2
*Calmitol*
Lever Brothers Company ..... 39
*Vimms Industrial Plan*
Lilly, Eli, and Company ..... 60
*'Merthiolate'*
Lily-Tulip Cup Corp. ..... 238
*Paper Cups and Food Containers*
Lobica, Inc. ..... 225
*Taxol*
Machlett Laboratories, Inc. ..... 45
*Electron Tubes*
McNeil Laboratories Incorporated ..... 2nd Cover
*Aspirocal*
Merck & Co., Inc. ..... 32
*Cuprex*
Merck & Co., Inc. ..... 51
*Penicillin*
Merrell, The Wm. S., Company ..... 31
*Cepacol*
Milburn Company, The ..... 41
*Ply Creams and Liquids*
Mine Safety Appliances Company ..... 37
*M.S.A. Benzol Indicator*
National Oil Products Company ..... 44
*Acidolate*
New York Medical Exchange ..... 232
*Medical Employment Service*
New York Pharmaceutical Company ..... 234
*Hayden's Viburnum Compound*
Norwich Pharmacal Company, The ..... 40
*Unguentine*
Numotizine, Inc. ..... 56
*Numotizine*
Nutrition Research Laboratories ..... 42, 43
*Ertron*
Occy-Crystine Laboratory ..... 22
*'Occy-Crystine*
Packwood, G. H., Mfg. Co. ..... 215
*Paxlanosav*
Parke, Davis & Company ..... 7
*Kapseals Abdec*
Parker, White & Heyl, Inc. ..... 19
*B-P Surgical Knife Handles*
Patch, The E. L., Company ..... 222
*Gadoment*
Pineoleum Co., The ..... 54
*Pineoleum*
Powers X-Ray Service ..... 219
*X-Ray Surveys*
Progressive Laboratory Specialties Company ..... 236
*Klo-Saver Aprons*
Reynolds, R. J., Tobacco Co. ..... 239
*Camel Cigarettes*
Roerig, J. B., & Company ..... 223
*Heptuna*
Sacro-Iliac Belt Co. ..... 238
*Sacro-Iliac Belts*
Schering Corporation ..... 21
*Ludozan*
Schoonmaker Laboratories, Inc. ..... 232
*V-E-M*
Searle, G. D., & Co. ..... 5
*Pavatrine*
Sharp & Dohme ..... 235
*B.F.I. Powder*
Shield Laboratories ..... 233
*Riasol*
Squibb, E. R., & Sons ..... 211
*Sulmefrin*
Stearns, Frederick, & Company ..... 17
*Mucilose*
Stepan Chemical Co., The ..... 33
*pHé*
Tampax Incorporated ..... 11
*Tampax*
Tarbonis Company, The ..... 50
*Tarbonis*
Teca Corporation ..... 226
*Hydrogalvanic Therapy*
Treasury Department, U. S. ..... 259
*U. S. War Bonds*
Upjohn ..... 227
*Unicaps*
United States ..... 257
*War Message*
U. S. Medical Specialty Co., Inc. ..... 230
*Infra Red Reflector Bulb*
United States Safety Service Co. ..... 236
*'Pep-Up' Salt Tablets*
Wander Company, The ..... 241
*Ovaltine*
Warner, William R., & Co., Inc. ..... 237
*'Gelusil'*
West Disinfecting Company ..... 58, 59
*Sulpho Hand Cleaner; Lan-O-Kleen*
White Laboratories, Inc. ..... 9
*Otomide*
White Laboratoris, Inc. ..... 26, 27
*Sulfathiazole Gum*
White Laboratories, Inc. ..... 53
*Vitamin A and D Ointment*
Willson Products Incorporated ..... 214
*Willson Respirators*
Winthrop Chemical Company, Inc. ..... 25
*Creamalin Tablets*
Winthrop Chemical Company, Inc. ..... 243
*Pluravit*
Wyeth Incorporated ..... 35
*Vitules*

# HIDDEN *Vitamin* HUNGER

Forces destructive to foods naturally rich in vitamins may play a prominent role in producing vitamin-deficient diets—with resulting decrease in your workers' health and efficiency.

One small, easily swallowed Kapseal Abdec... by meeting or exceeding the minimum daily requirements* for essential vitamins . . . provides comprehensive protection against vitamin-deficient diets.

*Federal Food and Drug Administration.

*Available in bottles of 25, 50, 100 and 250.*

**KAPSEALS *Abdec***

**PARKE, DAVIS & COMPANY • DETROIT 32, MICHIGAN**

Industrial Medicine
Reg U. S. Pat. Off.

Industrial and Railway
MEDICAL and SURGICAL
Associations
Official Publication

Industrial Medicine
Reg U. S. Pat. Off.

## American Association of Industrial Physicians and Surgeons

THE object of this Association shall be to foster the study and discussion of the problems peculiar to the practice of industrial medicine and surgery; to develop methods adapted to the conservation of health among workers in the industries; to promote a more general understanding of the purposes and results of the medical care of employees, and to unite into one organization members of the medical profession specializing in industrial medicine and surgery for their mutual advancement in the practice of their profession.

**President:**
FREDERICK W. SLOBE, M.D.,
Chairman, Committee Industrial Health,
Illinois State Medical Society,
2024 South Western Avenue,
Chicago 8, Illinois.

**President-Elect:**
MELVIN N. NEWQUIST, M.D.,
The Texas Company,
New York, New York.

**First Vice-President:**
LOYAL A. SHOUDY, M.D.,
Bethlehem Steel Company,
Bethlehem, Pennsylvania.

**Second Vice-President:**
HENRY S. BROWN, M.D.,
Michigan Bell Telephone Company,
Detroit, Michigan.

**Treasurer:**
EDWARD C. HOLMBLAD, M.D.,
Railway Express Agency,
28 East Jackson Boulevard,
Chicago 4, Illinois. (Wabash 8237)

**Managing Director:**
EDWARD C. HOLMBLAD, M.D.,
Railway Express Agency,
28 East Jackson Boulevard,
Chicago 4, Illinois. (Wabash 8237)

**Directors, 1943-1945**

RICHARD P. BELL, M.D.,
Cleveland Diesel Engine Division,
General Motors Corporation,
Cleveland, Ohio.

EDWARD P. HELLER, M.D.,
C. B. & Q. Railway,
Kansas City, Missouri.

WILLIAM A. SAWYER, M.D.,
Eastman Kodak Company,
Rochester, New York.

THEODORE L. STORY, M.D.,
American Optical Company,
Southbridge, Massachusetts.

BEVERLY L. VOSBURGH, M.D.,
General Electric Company,
Schenectady, New York.

JOHN J. WITTMER, M.D.,
Consolidated Edison Co. of New York, Inc.,
New York, New York.

**Directors, 1944-1946**

HARVEY BARTLE, M.D.,
Pennsylvania Railroad,
Philadelphia, Pennsylvania.

E. A. IRVIN, M.D.,
Cadillac Motor Division, General Motors
Corporation, Detroit, Michigan

R. F. KURZ, M.D.,
Emerson Electric & Mfg. Company,
St. Louis, Missouri.

F. E. POOLE, M.D.,
Lockheed Aircraft Corporation,
Burbank, California.

H. A. VONACHEN, M.D.,
Caterpillar Tractor Company,
Peoria, Illinois.

A. H. WHITTAKER, M.D.,
Detroit Industries,
Detroit, Michigan.

**1944-1945 Committees**

**Auditing Committee:**
THEODORE L. STORY, M.D., Chairman.
BENJAMIN FREES, M.D.
G. H. GEHRMANN, M.D.

**Certification Committee:**
HENRY S. BROWN, M.D., Chairman.
WILLIAM A. SAWYER, M.D.
STUART F. MEEK, M.D.
JOSEPH H. CHIVERS, M.D.

**Component Societies:**
A. H. WHITTAKER, M.D., Chairman.
JAMES M. CARLISLE, M.D.
FLOYD SHAFFER, M.D.
LOUIS W. SPOLYAR, M.D.

## PERSONAL

DR. J. A. WHITE has been appointed Chief Medical Examiner, Pennsylvania Railroad, succeeding DR. HARVEY BARTLE, recently retired. DR. WHITE was the company's Medical Examiner at Washington.

DR. A. C. DICK, for some time Medical Director, Consolidated Vultee Aircraft Corporation, San Diego, California, has resigned that position.

KENNETH M. MORSE, engineer in the Division of Industrial Hygiene of the Illinois Department of Public Health, has been put in temporary charge of the Division on account of the reactivation of the U. S. Public Health Service commission of DR. BRUCE M. BROWN who was recently appointed Chief of the Division (INDUSTRIAL MEDICINE, January, 1945). DR. BROWN, formerly acting Medical Director of the Iowa Health Department Division of Industrial Hygiene, has been assigned to immediate duty with the coast guard.

DR. CHARLES F. ENGEL, assistant medical director, and EDGAR C. BARNES, industrial hygiene engineer, are among the recent recipients of the Westinghouse Order of Merit, highest recognition for achievement given by the Westinghouse Electric & Manufacturing Company. DR. ENGEL, a native of Homestead, Pennsylvania, has been connected with the Westinghouse Medical Department for 28 years. He was graduated in 1909 from Bennett College, which now is a unit of Loyola University, and was engaged in private practice for five years in Butler County, Pennsylvania, before joining the company. He is an instructor in the University of Pittsburgh Department of Industrial Medicine. MR. BARNES was born in Franklin, Pennsylvania, and was graduated in 1930 from Pennsylvania State College with a Bachelor of Science degree. He has been with Westinghouse since then, with the exception of one year, and is the inventor of an electrostatic dust and fume sampler.

DR. RAYMOND HUSSEY, Baltimore, has returned from active duty to inactive status in order to become dean, professor of preventive medicine and organizer of the School of Occupational Health at the Wayne University Medical Science Center, Detroit. In developing the program DR. HUSSEY announces that the positive aspect of health will be the main consideration in developing the

## American Association of Industrial Physicians and Surgeons

**Constitution and By-Laws Revision:**
RUDOLPH F. KURZ, M.D., Chairman.
BEVERLY L. VOSBURGH, M.D.
ROBERT A. KEHOE, M.D.

**Convention (1945) Committee:**
MELVIN N. NEWQUIST, M.D., Chairman.
Co-Chairmen:
C. O. SAPPINGTON, M.D.
O. A. SANDER, M.D.
M. H. KRONENBERG, M.D.
JOSEPH H. CHIVERS, M.D.

**Budget and Finance Committee:**
H. A. VONACHEN, M.D., Chairman.
M. N. NEWQUIST, M.D.
F. E. POOLE, M.D.

**History Committee:**
LOYAL A. SHOUDY, M.D., Chairman.
A. H. WHITTAKER, M.D.
OTTO P. GEIER, M.D.

**Graduate Fellowship Committee:**
T. LYLE HAZLETT, M.D., Chairman.
WILLIS F. KRAEMER, M.D.
F. J. WAMPLER, M.D.
SARAH I. MORRIS, M.D.
M. H. KRONENBERG, M.D.
R. A. KEHOE, M.D.
C. H. WATSON, M.D.
J. D. WILLEMS, M.D.
R. T. JOHNSTONE, M.D.
J. J. WITTMER, M.D.
D. L. LYNCH, M.D.
L. A. SHOUDY, M.D.
W. J. MCCONNELL, M.D.
J. M. CARLISLE, M.D.

**Medical Education Committee:**
M. H. KRONENBERG, M.D., Chairman.
FRANK T. MCCORMICK, M.D.
HARVEY BARTLE, M.D.
T. LYLE HAZLETT, M.D.
SARAH I. MORRIS, M.D.
F. E. POOLE, M.D.
F. J. WAMPLER, M.D.
R. T. JOHNSTONE, M.D.

**Membership Committee:**
C. O. SAPPINGTON, M.D., Chairman.
RICHARD P. BELL, M.D.
H. G. LAFFERTY, M.D.
J. NEWTON SHIRLEY, M.D.
CHARLES DRUECK, JR., M.D.

**Nutrition Committee:**
H. A. VONACHEN, M.D., Chairman.
WILLIAM A. SAWYER, M.D.
FRANK M. GATTO, M.D.

**Committee on Policy and Plan:**
F. E. POOLE, M.D., Chairman.
H. A. VONACHEN, M.D.
HARVEY BARTLE, M.D.

**Psychosomatic Medicine Committee:**
E. A. IRVIN, M.D., Chairman.
LYDIA G. GIBERSON, M.D.
HARVEY BARTLE, M.D.
C. D. SELBY, M.D.
JAMES H. STERNER, M.D.
L. E. HIMMLER, M.D.
G. A. EADIE, M.D.

**Committee on Past Presidents:**
LOYAL A. SHOUDY, M.D., Chairman.
DANIEL L. LYNCH, M.D.
C. D. SELBY, M.D.
J. J. WITTMER, M.D.

**Publication and Editorial Policy:**
EDWARD P. HELLER, M.D., Chairman.
C. O. SAPPINGTON, M.D.
M. H. MANSON, M.D.
MAX R. BURNELL, M.D.
CAREY P. MCCORD, M.D.

**Qualifications Committee:**
FRANK T. MCCORMICK, M.D., Chairman.
DANIEL L. LYNCH, M.D.
RICHARD E. NEWBERRY, M.D.
CHARLES F. ENGEL, M.D.

**Venereal Disease Committee:**
FLOYD E. SHAFFER, M.D., Chairman.
H. A. VONACHEN, M.D.
HARVEY BARTLE, M.D.

**Knudsen Award Committee:**
C. O. SAPPINGTON, M.D., Chairman.
L. U. GARDNER, M.D.
R. R. SAYERS, M.D.
C. D. SELBY, M.D.
W. A. SAWYER, M.D.
H. A. VONACHEN, M.D.

**Scientific Exhibits and Scientific Awards:**
H. G. GARDINER, M.D., Chairman.
W. F. LYON, M.D.
CHARLES DRUECK, JR., M.D.

# NEW, More Effective Topical Chemotherapy for Common Otologic Infections

*White's* **OTOMIDE** is a stable solution of sulfanilamide and carbamide (urea) in glycerin of high specific gravity.

Anhydrous chlorobutanol, a recognized local anesthetic agent *that is therapeutically compatible with sulfonamides*, is included in the formula for its analgesic and antipruritic properties.

**FORMULA:**

| | |
|---|---|
| Carbamide (Urea) | 10% |
| Sulfanilamide | 5% |
| Chlorobutanol (anhydrous) | 3% |
| Glycerin (h.sp.gr.) | q.s. |

**Therapeutic properties of Carbamide component of Otomide:**

1. Chemically debrides lesion by solvent effect on necrotic tissues.
2. Renders sulfanilamide effectively antibacterial even in the presence of pus.
3. Solubilizes sulfanilamide, effects higher tissue concentrations of sulfonamide.
4. Increases diffusibility of sulfanilamide through living and dead tissues.
5. Is free from irritating effect on living tissues.

**INDICATIONS:** Local management of suppurative and nonsuppurative otitis media, and of sulfonamide-susceptible infections of external auditory canal.

White's Otomide is available in dropper bottles of one-half fluid ounce (15 cc.).

**IMPORTANT:** Please note that your patient requires your prescription to obtain this product from the pharmacist.

White Laboratories, Inc., Pharmaceutical Manufacturers, Newark 2, N. J.

*White's*

# OTOMIDE

### Association for the Advancement of Industrial Medicine and Surgery Inc.

PURPOSE: To disseminate accurate medical knowledge in reference to the diagnosis and treatment of all conditions arising out of and in the course of employment.

**Officers**

RUSSELL C. KIMBALL, M.D., President, 4 Irving Place, New York.
J. HUDSON BLAUVELT, M.D., Vice-President, 80 Maiden Lane, New York.
ROBERT BOGAN, M.D., Recording Secretary, 2 West 75th Street, New York.
JOSEPH L. RAMIREZ, M.D., Treasurer, 30 Fifth Avenue, New York.
MR. JOHN J. BLACKFORD, Executive Secretary, 370 Lexington Avenue, New York.

**Executive Council**

Term Expires 1945
HALCYON HALSTEAD, M.D., Pelham Manor, New York.
ANTHONY AVATA, M.D., Hartford Accident & Indemnity Company, New York.
JOHN J. BROZDOWSKI, M.D.
Term Expires 1946
FREDERICK H. ALBEE, M.D., New York.
COL. WILLIS W. LASHER, West Point, New York.
JOHN J. WITTMER, M.D., Consolidated Edison Company, New York.
Term Expires 1947
T. WALLACE DAVIS, M.D. Borden Company, New York.
ROBERT F. BARBER, M.D.,
HARRY V. SPAULDING, M.D., General Accident Co., New York.

**Component Society of the American Association of Industrial Physicians and Surgeons.**

### Central States Society of Industrial Medicine and Surgery

**Officers 1944-45**

FRED M. MILLER, M.D., Chicago, President.
H. W. WELLMERLING, M.D., Bloomington, Illinois, President-Elect.
LEWIS M. OVERTON, M.D., Des Moines, Iowa, Vice-President.
FRANK P. HAMMOND, M.D., Chicago, Secretary-Treasurer.

**Board of Governors**

Terms to Expire 1945.
URBAN E. GEBHARD, M.D., Milwaukee
WALTER J. JONES, M.D., La Crosse, Wisc.
MELVIN L. HOLE, M.D., Danvile, Ill.
Terms to Expire 1946.
C. O. SAPPINGTON, M.D., Chicago
HAROLD A. VONACHEN, M.D., Peoria, Ill.
D. ORIS CONLEY, M.D., Streator, Ill.
Terms to Expire 1947.
W. M. HARTMAN, M.D., Macomb, Ill.
ROLAND A. JACOBSON, M.D., Chicago
ROBERT M. GRAHAM, M.D., Chicago.

**Component Society of the American Association of Industrial Physicians and Surgeons.**

### American Association of Railway Surgeons

J. L. CROOK, M.D., Jackson, Tenn. President.
HAROLD A. SPILMAN, M.D., Ottuma, Ia. Vice-President.
A. J. O'BRIEN, M.D., Ironwood, Mich. Vice-President.
JOHN J. BRANDABUR, M.D., Huntington, W. Va., Vice-President.
T. L. HANSEN, M.D., Chicago. Treasurer.
R. B. KEPNER, M.D., Chicago. Secretary.

**Executive Board**

A. R. METZ, M. D., Chicago, Chairman
JOHN R. NILSSON, M.D., Omaha, Neb.
W. J. LANCASTER, M.D., Wilmington, N. C.
D. B. MOSS, M.D., Palmyra, Mo.
IRVING S. CUTTER, M.D., Chicago.
HARVEY BARTLE, M.D., Philadelphia.

engineering-medical relations for the promotion and maintenance of health through the establishment of employee health programs in all levels of occupation. During his period of service with the Army of the United States, DR. HUSSEY organized and directed the activities of the Army Industrial Hygiene Laboratory. He graduated at the University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore, in 1911. In the past his work has included the organization and direction of the medical board for occupational diseases in Maryland. He held the chairmanship of the committee on industrial health of the Medical and Chirurgical Faculty of Maryland, and is currently a member of the A.M.A. Council on Industrial Health.
—*J.A.M.A.*, February 17, 1945.

SOUTHERN Medical Association has established a Section on Industrial Health. The Section officers include DR. CHARLES W. ROBERTS, Atlanta, Georgia, chairman; DR. OLIVER B. ZEINERT, St. Louis, vice-chairman; and DR. JOHN J. BRANDABUR, Huntington, West Virginia, secretary.

DR. GEORGE G. DAVIS, formerly Chief Surgeon of the Carnegie Steel Company, Chicago, and later in private practice, is now head of the Surgical Department, Alaska Railroad Hospital, Anchorage, Alaska.

CHICAGO SOCIETY OF INDUSTRIAL MEDICINE AND SURGERY held its Mid-winter Scientific Meeting at the Palmer House on January 29. The guest speaker was DR. VINTON ERNEST SILER, Assistant Professor of Surgery, Cincinnati University, and attending Surgeon, Cincinnati General Children's and Bethesda Hospitals, whose subject was "Infections of the Hand." DR. ROLAND A. JACOBSON, Chief Surgeon, Railway Express Agency; DR. RICHARD J. BENNETT, Chief Surgeon, Carnegie - Illinois Steel Corporation; MAJOR FRANK E. WEST, Chief, Orthopedic Section, Gardiner General Hospital; DR. J. DANIEL WILLEMS, Chief Surgeon, Lumberman's Mutual Casualty Company; and DR. SUMNER KOCH, Chicago, participated in the discussion.

THE WESTERN ASSOCIATION OF INDUSTRIAL PHYSICIANS AND SURGEONS has cancelled its annual convention for this year: ODT request.

DR. ROBERT C. BUELOW, for many years Medical Examiner for the City Service Commission of Milwaukee, has become a member of the Medical staff of the Wisconsin Electric Power Company.

DR. FRED H. ALBEE, 69, former president of the International College of Surgeons, consulting orthopedic surgeon to 24 hospitals, and internationally known as a specialist in traumatic and reconstructive surgery, died February 15.

### New York State Society of Industrial Medicine

**1942-43 Officers**

O. A. BRENENSTUHL, M.D., President.
P. K. MENZIES, M.D., Vice-President.
PHILIP L. FORSTER, M.D., Treasurer.
FRANK E. REDMOND, Executive Secretary

**Directors**

DR. H. H. BAKER, Rochester. 423 Granite Bldg.
DR. O. A. BRENENSTUHL 345 Hamilton St., Albany
DR. PHILIP L. FORSTER, Albany 367 State St.
DR. CHAS. D. SQUIRES, Binghamto 28 Conklin Ave.
DR. WILLIS C. TEMPLER, Corning Corning Glass Works.
DR. FRANCIS J. RYAN, Syracuse. New York State Railways.
DR. B. J. SLATER, Rochester. Eastman Kodak Company
DR. L. W. LOCKE, Utica. 288 Genessee St.
DR. A. M. DICKINSON, Albany New York Central R. R.
DR. M. S. BLOOM, Binghamton Dunn & McCarthy.
DR. E. MACD. STANTON, Schenectady. American Locomotive Company.
DR. F. N. G. JERAULD, Niagara Falls 723 Erie Ave.
DR. DONALD C. O'CONNOR, Buffalo. International Railways. American Radiator Co.
DR. RICHARD S. FARR, Syracuse. Consulting Orthopedist.
DR. C. W. WOODALL, Schenectady. 146 Barrett St.
DR. JOHN L. NORRIS, Rochester. Eastman Kodak Company, Kodak Park
DR. PAUL B. JENKINS, Binghamton. 141 Main St.
DR. E. A. VANDER VEER, Albany 28 Eagle St.
DR. OTTMAR W. FREY, Oneida. Oneida Ltd.
DR. HAROLD C. LYMAN, Utica. 250 Genessee St.
DR. P. K. MENZIES, Syracuse. 511 Medical Arts Bldg.
DR. FRED C. SABIN, Little Falls. 23 W. Ann. St.
DR. REEVE M. BROWN, Buffalo. Chevrolet-Motor and Axle Div. of General Motors.

**The Industrial Doctor**
OFFICIAL SECTION OF THE NEW YORK STATE SOCIETY OF INDUSTRIAL MEDICINE

**Official Section of the New York State Society of Industrial Medicine. Now combined with INDUSTRIAL MEDICINE**

Published under supervision of the Ways and Means Committee of the New York State Society of Industrial Medicine. Editorial office, F. E. REDMOND, Managing Editor, 361 Delaware Avenue, Buffalo, N. Y. Articles herein do not necessarily reflect the opinion or policy of this journal nor of the New York State Society of Industrial Medicine.

**Editorial Board**

B. J. SLATER, M.D. M. S. BLOOM, M. D
REEVE M. BROWN, M.D.
L. W. LOCKE, M.D. FRED C. SABIN, M.D
PAUL B. JENKINS, M.D.
WILLIS C. TEMPLER, M.D
A. M. DICKINSON, M.D.
P. L. FORSTER, M.D.
CHAS. D. SQUIRES, M.D.
RICHARD S. FARR, M.D.
OTTMAR W. FREY, M.D.
HAROLD C. LYMAN, M.D.
P. K. MENZIES, M.D.
C. W. WOODALL, M.D.
FRANCIS J. RYAN, M.D.
D. C. O'CONNOR, M.D.
F. N. C. JERAULD, M.D.
E. MACD. STANTON, M.D.
E. A. VANDER VEER, M.D.
H. H. BAKER, M.D.
O. A. BRENENSTUHL, M.D.
JOHN L. NORRIS, M.D.

FRANK E. REDMOND, Managing Editor
361 Delaware Ave., Buffalo New York.

*Does Tampax eliminate the problem of menstrual odor?*

# "THE ANSWER IS *Yes*"

Clinical investigators have shown that internal protection (as afforded by TAMPAX) serves to abolish objectionable odor . . . by absorption of the flow *before* it becomes exposed to air and can suffer consequent decomposition.[1,2] For "menstrual blood taken directly from the interior of the uterus has no odor."[4]

Primarily, TAMPAX meets *all* the requirements of modern menstrual hygiene — since (as one specialist summarizes) "the evidence is conclusive that the tampon method of menstrual hygiene is safe, comfortable and not prejudicial to health..."[3]

Indeed, so comfortable is "flat expansion", provided only by TAMPAX, that many women are hardly aware of its presence in situ.[1] Welcome freedom from external bulkiness, vulval irritation or chafing from perineal pads, allows the patient a wider range of activity during the period. An individual applicator permits easy insertion, and a moisture-resistant cord facilitates dainty removal.

TAMPAX is available in three sizes: "Super", "Regular" and "Junior", with absorptive capacities of 45-cc., 30.3-cc. and 20-cc. respectively. Use coupon below for professional samples.

TAMPAX

ACCEPTED FOR ADVERTISING BY THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

REFERENCES – 1 West. J. Surg. & Gyn., 51:150, April, 1943. 2 Clin. Med. & Surg., 46:327, August, 1939. 3 Med. Rec., 155: 316, 1942. 4 Crossen, H. S. and R. J.: Diseases of Women, C. V. Mosby Co., St. Louis, 9th ed., 1941.

TAMPAX INCORPORATED IM-35
PALMER, MASSACHUSETTS

Please send me a professional supply of the three absorbencies of Tampax.

Name Public Library

Address Detroit, Michigan

City State

### Chicago Society of Industrial Medicine and Surgery

**1944-45 Officers**

CHARLES DRUECK, JR., M.D., Chicago, President.
J. DANIEL WILLEMS, M.D., Chicago, Vice-President.
FRANK P. HAMMOND, M.D., Chicago, Secretary-Treasurer.

**Board of Governors**

Terms to Expire 1945
THOMAS C. BROWNING, M.D., Chicago.
KARL G. RUNDSTROM, M.D., Chicago.
LEWIS T. BAXTER, M.D., Chicago.
Terms to Expire 1946
CLARENCE W. HENNAN, M.D., Chicago.
DWIGHT I. GEARHART, M.D., Chicago.
H. GLENN GARDINER, M.D., Chicago.
Terms to Expire 1947
JOSEPH H. THOMAS, M.D., Chicago.
ROLAND A. JACOBSON, M.D., Chicago.
O. WALTER REST, M.D., Chicago.

### Association of Railway and Industrial Physicians and Surgeons of Kansas City

**Officers**

EUGENE C. BLACK, M.D., President.
CARL H. BRUST, M.D., Vice-President.
FRED MORLEY, M.D., Secretary-Treasurer. R.R. 4, Kansas City, Kansas.

**Directors**

MATTHEW W. PICKARD, M.D.
JOHN E. CASTLES, M.D.
F. L. FEIERABEND, M.D.
VINCENT T. WILLIAMS, M.D.
Delegate to A.A.I.P. & S. Convention:
E. P. HELLER, M.D.

**Component Society of the American Association of Industrial Physicians and Surgeons.**

### Western Association of Industrial Physicians and Surgeons

**Officers**

RUTHERFORD T. JOHNSTONE, M.D., President.
Director, Dept. of Occupational Diseases, Golden State Hospital, Los Angeles.

RICHARD O. SCHOFIELD, M.D., F.A.C.S., Vice-President.
1027 Tenth Street, Sacramento, California.

RODNEY R. BEARD, M.D., M.P.H., Secretary.
Medical Director, Pacific-Alaska Division, Pan-American Airways, San Francisco.

J. M. MCCULLOUGH, M.D., Treasurer.
Plant Physician,
Union Oil Company, Oleum Plant, California and Hawaiian Sugar Refining Corp., Ltd., Crockett, California.

ELIZABETH M. CAFFREY, R.N., P.H.N., Executive Secretary.
California and Hawaiian Sugar Refining Corp., Ltd., Crockett, California.

**Directors**

ROBERT T. LEGGE, M.D., (1945)
Professor of Hygiene,
University of California,
Berkeley, California.

BENJAMIN M. FREES, M.D., F.A.C.S., (1946)
Chief Surgeon, Armour and Company,
Firestone Tire and Rubber Company,
947 West 8th Street, Los Angeles.

JOHN D. BALL, M.D., (1947)
Spurgeon Building,
Santa Ana, California.

WILLIAM P. SHEPARD, M.D., (1948)
Asst. Sec'y and Pacific Coast Welfare Director, Metropolitan Life Ins. Co.,
600 Stockton Street,
San Francisco, California.

Chairman Board of Directors
C. A. WALKER, M.D., F.A.C.S.,
Chief Surgeon, Southern Pacific Co., Pacific Lines, Southern Pacific Hospital,
San Francisco, California.

**Component Society of the American Association of Industrial Physicians and Surgeons.**

## GENERAL

KANSAS CITY SOCIETY OF RAILWAY AND INDUSTRIAL SURGEONS had DR. DUDLEY IRWIN, of the Aluminum Company of America, Pittsburgh, as guest speaker at a round-table dinner meeting February 27.

AMERICAN ASSOCIATION OF INDUSTRIAL PHYSICIANS AND SURGEONS was one of the 17 organizations sponsoring and cooperating in the 32nd Annual Meeting of the American Social Hygiene Association and Chicago Conference on Social Hygiene, February 7. The subject of the evening session was "Industry versus VD." DR. J. H. CHIVERS, Chairman, Advisory Committee to Industrial Health Division, Illinois Department of Public Health, presided, and DR. HAROLD VONACHEN, medical director, Caterpillar Tractor Company, was one of the speakers.

DR. EDWARD C. HOLMBLAD, managing director of the AMERICAN ASSOCIATION OF INDUSTRIAL PHYSICIANS AND SURGEONS, yesterday asserted that the strain of caring for the millions of American war workers is causing the highest death rate in history among the organization's membership. Some industrial physicians in war plant areas, he said, are today attending four times the number of patients constituting their normal practice during peace years. The association's board of directors at a meeting in the Drake hotel voted to attempt conducting the organization's business by mail during the coming year because of an order by the war committee on conventions canceling a membership session scheduled to have been held here.

—*Chicago Tribune, February* 13, 1945.

### New Jersey Association

ON JANUARY 12, a symposium on "Veterans in Industry" was held by the NEW JERSEY ASSOCIATION OF INDUSTRIAL PHYSICIANS AND SURGEONS at the Academy of Medicine, Newark. DR. J. M. CARLISLE, President, turned over the meeting to DR. J. F. JOHNSON, Medical Director, Eastern Aircraft Trenton Division, who was presiding officer of the evening. Among the speakers were: LT. W. P. CHASE, Fort Dix, New Jersey—"The Army Separation Classification Program." MR. A. A. HENDRIX, Personnel Director, Eastern Aircraft Division—"Some Manage-

### Milwaukee Association of Industrial Physicians and Traumatic Surgeons

**Officers**

President
S. H. WETZLER, M.D.,
606 W. Wisconsin Ave., Milwaukee

Vice-President
ELSTON L. BELKNAP, M.D.,
231 W. Wisconsin Ave., Milwaukee

Secretary-Treasurer
GEORGE H. HOFFMANN, M.D.,
7006 W. Greenfield Ave., Milwaukee

**Board of Directors**

U. E. GEBHARD, M.D.
1382 S. 16th Street, Milwaukee
H. G. OAKLAND, M.D.
1651 N. 12th St., Milwaukee
EDWARD QUICK, M.D.,
411 E. Mason St., Milwaukee
DAVID MEHIGAN, M.D.,
231 W. Wisconsin Ave., Milwaukee

### New Jersey Association of Industrial Physicians and Surgeons

**Officers**

President
J. M. CARLISLE, M.D.,
Merck & Co., Rahway

Vice-President
A. F. MANGELSDORF, M.D., Martinsville

Treasurer
M. E. LOWELL, M.D.,
434 Summit Ave., Westfield

Secretary
AUGUSTUS GIBSON, M.D.,
Merck & Co., Rahway

**Directors**

DONALD O. HAMBLIN, M.D.,
American Cyanamid Co.,
39 Rockefeller Plaza, New York City

RUSSELL G. BIRRELL, M.D.,
Standard Oil Co., of New Jersey,
Bayway Refinery, Linden

E. E. EVANS, M.D.,
E. I. duPont de Nemours,
Dye Works Hospital, Deepwater

WM. H. MCCALLION, M.D., F.A.C.S.,
General Aniline Co., Elizabeth

**Component Society of the American Association of Industrial Physicians and Surgeons.**

### Michigan Association of Industrial Physicians and Surgeons

**Officers**

LEON E. SEVEY, M.D., Grand Rapids
President
DONALD R. BRASIE, M.D., Flint
President-Elect
CAREY P. MCCORD, M.D., Detroit
Vice-President
A. L. BROOKS, M.D., Detroit
Secretary-Treasurer
601 Piquette Ave.

**Board of Directors**

HENRY COOK, M.D., Flint
FRANK MCCORMICK, M.D., Detroit
R. H. DENHAM, M.D., Grand Rapids

**Component Society of the American Association of Industrial Physicians and Surgeons.**

### Florida Association of Industrial Surgeons

**Officers**

KENNETH A. MORRIS, M.D., President
F. A. VOGT, M.D., President-Elect
HERMAN WATSON, M.D., Vice-President
A. M. BIDWELL, M.D., Secretary-Treasurer
First National Bank Bldg.,
Tampa 2, Florida.

**Directors**

JOHN R. BOLING, M.D. LLOYD J. NETTO, M.D.
FRANK D. GRAY, M.D. J. H. PITTMAN, M.D.

**Component Society of the American Association of Industrial Physicians and Surgeons.**

HEPVISC

LOWERS HIGH BLOOD PRESSURE
—Usually 20-30 mm. in 4 hours.
RELIEVES HYPERTENSIVE HEADACHES
—In 80% of cases, including tinnitus.
Dosage: 1 or 2 tablets, ½ hour before meals.
SAMPLE AND FORMULA ON REQUEST
ANGLO-FRENCH LABORATORIES, Inc., 75 VARICK STREET NEW YORK 13, N. Y.

# AO COLOR PERCEPTION TEST

## *Now Available to Plant Physicians*

The ever-increasing application of color to industry . . . such as color "coding" for piping systems, electric and electronic assemblies . . . makes color distinction a vital job factor in many plants. You can detect individual color deficiencies with the AO Pseudo-isochtomatic Color Perception Test Charts . . . now available to Plant Physicians.

Approved by the Surgeon General of the U. S. Navy . . . used officially by both the Army and Navy . . . the AO Color Perception Test Charts combine the best features of the Ishihara and Stillings collections. 46 charts are durably bound . . . simple and efficient to use. Ordinary cases of red and green color deficiencies are easily detected by a single reading of several key plates. Rarer cases of blue deficiency are disclosed by administering the complete test.

The price of this entire volume (No. 1378) is only $10. Write to American Optical Company, Southbridge, Mass., Department CP 11, for complete information.

ARMY (E) NAVY

American Optical

COMPANY

SOUTHBRIDGE, MASSACHUSETTS

## New England Conference of Industrial Physicians

**Officers**

JOHN F. KENNEY, M.D., F.A.C.P., President,
Medical Director, Lorraine Mfg. Co.,
209 Broadway, Pawtucket, R. I.

THOMAS P. KENDRICK, M.D., Vice-President,
Plant Physician, Boston Woven Hose and Boston Elevated Railroad,
29 Hampshire Street, Cambridge, Mass.

J. ALLAN THOMPSON, M.D., Sec'y-Treasurer,
Asst. Medical Director, New England Telephone & Telegraph Co.,
245 State Street, Boston.

**Board of Directors**

J. ROBERTSON KNOWLES, M.D.,
Medical Director, Boston & Maine R.R.,
North Station Building, Boston.

JAMES I. RABINOWITZ, M.D.,
Medical Director, New England Power Service Co.,
441 Stuart Street, Boston.

TIMOTHY F. ROCK, M.D.,
Nashua Manufacturing Company,
77 Main Street, Nashua, New Hampshire.

ROY V. SANDERSON, M.D.,
Plant Physician, Winstead Hosiery,
570 Main Street, Winstead, Conn.

STANLEY SPRAGUE, M.D.,
J. & P. Coates, Inc.
107 Broadway, Pawtucket, Rhode Island.

**Component Society of the American Association of Industrial Physicians and Surgeons.**

## Rhode Island Society of Industrial Physicians and Surgeons

**Officers**

President
CHARLES L. FARRELL, M.D.,
Collyer Insulated Wire Company, Pawtucket

President-Elect
Vice-President
RICHARD F. MCCOART, JR., M.D.,
Universal Winding Co., Cranston;
Textile Finishing Co., Providence

Secretary
JAMES P. DEERY, M.D.,
Division of Industrial Hygiene,
State Department of Health, Providence

Treasurer
ROBERT T. HENRY, M.D.,
Newman Crosby Company, Pawtucket

**Board of Directors**

THOMAS A. EGAN, M.D.,
New Haven Railroad, Providence

FRANK A. MERLINO, M.D.,
Providence Tuberculosis League,
Division of Industrial Tuberculosis.

REMINGTON P. CAPWELL, M.D.,
Federal Products Co., Providence
Whittet-Higgins Co., Providence

**Section of the New England Conference of Industrial Physicians.**

## The Ambulatory Fracture Association

**Officers**

President
A. H. DIEHR, M.D.
1st Vice-President
H. D. JUNKIN, M.D.
2nd Vice-President
P. E. HALEY, M.D.
Secretary-Treasurer
H. W. WELLMERLING, M.D.
Office, 33 N. La Salle Street, Chicago 2

**Board of Governors**

A. H. DIEHR, M.D. H. D. JUNKIN, M.D.
P. E. HALEY, M.D. C. P. BLAIR, M.D.
W. B. SLAUGHTER, M.D. A. W. COLLINS, M.D.
H. W. WELLMERLING, M.D.

## Association of Surgeons of the New York Central System

B. L. COLEY, M.D., F.A.C.S., President
N. W. GILLETTE, M.D., Vice-President
H. M. LONG, M.D., F.A.C.S., Vice-President
G. H. MARCY, M.D., Vice-President
H. A. FATHAUER, Secretary-Treasurer
413 LaSalle Street Station,
Chicago. Telephone WABash 4200

**Executive Council**

B. L. COLEY, M.D., F.A.C.S.
Chief Surgeon, New York City
L. A. ENSMINGER, M.D., F.A.C.S.
Chief Surgeon, Indianapolis
H. A. FATHAUER
Secretary-Treasurer
GEORGE P. MYERS, M.D., F.A.C.S.
Medical Director Detroit
F. E. PIERCE, M.D., F.A.C.S.
Chief Surgeon, Chicago
HERBERT M. LONG, M.D., F.A.C.S.
Chief Surgeon, Pittsburgh
OLIVER G. BROWNE
General Claims Attorney

ment Views on Veterans in Industry." DR. AUGUSTUS GIBSON, Merck & Co.—"Pre-placement Physical Examinations." DR. G. A. EADIE, Eastern Aircraft Linden Division—"Some Experiences in Relations with the Veterans in Industry and the Industrial Medical Department." MAJOR WILLIAM A. FLOOD, Lyons Veterans Facilities, Lyons, representing LT. COL. L. V. LOPEZ—"Services Available to the Veteran in Industry through the Lyons Veterans Facilities." MR. VICTOR BLEEKER, Regional Director, N. J. Rehabilitation Commission, representing MR. J. G. BUCH, State Director—"History and Functions of the State Rehabilitation Commission." After the presentation of the papers, DR. JOHNSON summarized the salient points of each. A discussion period followed during


# NICOTINE CONTENT
## Scientifically Reduced to LESS than 1%

TESTING SANO CIGARETTE SMOKE FOR ITS NICOTINE CONTENT

SANO cigarettes are a safe way and a sure way to reduce your patient's nicotine intake. Sano provide that substantial reduction in nicotine usually necessary to procure definite physiological improvement. With Sano there is no question about the amount of nicotine elimination. With Sano you encounter none of these variable factors involved in methods which merely attempt to extract nicotine from tobacco smoke. With Sano, the nicotine is actually removed from the tobacco itself. Sano guarantees always less than 1% nicotine content. Yet Sano are a delightful and satisfying smoke.

**WARNING**
Chemical analyses show that pinches of cotton used in cigarette mouth-pieces are entirely ineffective in removing any appreciable amount of nicotine from cigarette smoke.

**FREE PROFESSIONAL SAMPLES**
**For Physicians Only**
**HEALTH CIGAR CO. INC.**
IM—3-45 DEPT. E, 154 WEST 14TH ST.—NEW YORK, N. Y.
PLEASE SEND ME SAMPLES OF SANO CIGARETTES.
☐ Check here if you also wish samples of pipe tobacco.
NAME _____ M.D.
ADDRESS _____


## American Industrial Hygiene Association

**Officers 1944-1945**

J. J. BLOOMFIELD, President,
National Institute of Health,
Bethesda, Maryland.

R. A. KEHOE, M.D., President-Elect,
Director, Kettering Laboratories of Applied Physiology,
Cincinnati, Ohio.

E. C. BARNES, Secretary,
Westinghouse Electric & Mfg. Co.,
East Pittsburgh, Pennnsylvania.

J. B. LITTLEFIELD, Treasurer,
American Brake Shoe Company,
2501 Blue Island Avenue, Chicago.

H. H. SCHRENK, 1st Past-President,
U. S. Bureau of Mines,
Pittsburgh.

PHILIP DRINKER, 2nd Past-President,
Harvard School of Public Health
55 Shattuck Street, Boston.

**Board of Directors**

MANFRED BOWDITCH,
Director, Division of Occupational Hygiene, Massachusetts Department of Labor and Industries,
23 Joy Street, Boston.

J. WILLIAM FEHNEL,
Metropolitan Life Insurance Company.
1 Madison Avenue, New York City.

G. C. HARROLD,
Chrysler Corporation,
341 Massachusetts Avenue, Detroit.

LIEUT.-COL., T. F. HATCH,
A. F. Medical Research Laboratory,
Fort Knox, Kentucky.

E. G. MEITER,
Employers Mutual Liability Insurance Company, 120 Empire Building,
Milwaukee, Wisconsin.

J. H. STERNER, M.D.,
Eastman Kodak Company,
Rochester, New York.

W. R. BRADLEY,
American Cyanamid Company,
30 Rockefeller Plaza, New York.

W. C. L. HEMEON,
Industrial Hygiene Foundation,
4400 Fifth Avenue, Pittsburgh.

W. N. WITHERIDGE,
Detroit Department of Health,
1151 Taylor Avenue, Detroit.

## Territorial Association of Plantation Physicians

H. M. PATTERSON, M.D., Olaa, Hawaii, T. H., President.
M. A. BRENNECKE, M.D., Waimea, Kauai, T. H., Vice-President.
P. H. LILJESTRAND, M. D., Aiea, Oahu, T. H., Secretary-Treasurer.

**Component Society of the American Association of Industrial Physicians and Surgeons.**

## American Conference on Industrial Health

**Officers**

VOLNEY S. CHENEY, M.D., President
EDWARD C. HOLMBLAD, M.D.
First Vice-President
FREDERICK W. SLOBE, M.D.
Second Vice-President
HAROLD A. VONACHEN, M.D., Treasurer
JAMES A. VALENTINE, M.D., Secretary
C. O. SAPPINGTON, M.D., DR. P. H.
Executive Director

TO provide an organization, not for pecuniary profit, in which all agencies and societies, both medical and lay, concerned with the problems of industrial health can hold membership and can meet together in conference for the study, discussion and careful consideration of all industrial health problems and procedure; to engage in scientific research to determine the cause, nature, prevention and cure of diseases and injuries of occupations; to assist in establishing and supervising industrial health clinics to serve small industries; to establish and maintain hospitals which will furnish facilities for the care, treatment and study of occupational injuries and diseases; to make surveys of industrial medical services and recommendations for their improvement; to solicit, receive and administer funds for any purpose that will advance and/or improve industrial health; to establish undergraduate and/or post-graduate courses in industrial medicine and surgery and/or to cooperate with medical schools and industries in maintaining such courses; and to use all those means, which from time to time, may seem wise, for the advancement of industrial health

"From the point of view of preventive medicine, the evidence is conclusive that there is great opportunity to improve the health of the nation by increasing the vitamin B complex content of the diet of a considerable part of our population."[1]

'Tabloid' Yeast Concentrate contains the *entire* B complex thus providing in addition to well-established factors those lesser known components whose physiological roles are important but difficult to define accurately.

Although 'Tabloid' Yeast Concentrate is prepared from selected brewers' yeast, it does not contain fresh yeast's active enzymes or live cells which may cause intestinal fermentation and discomfort.

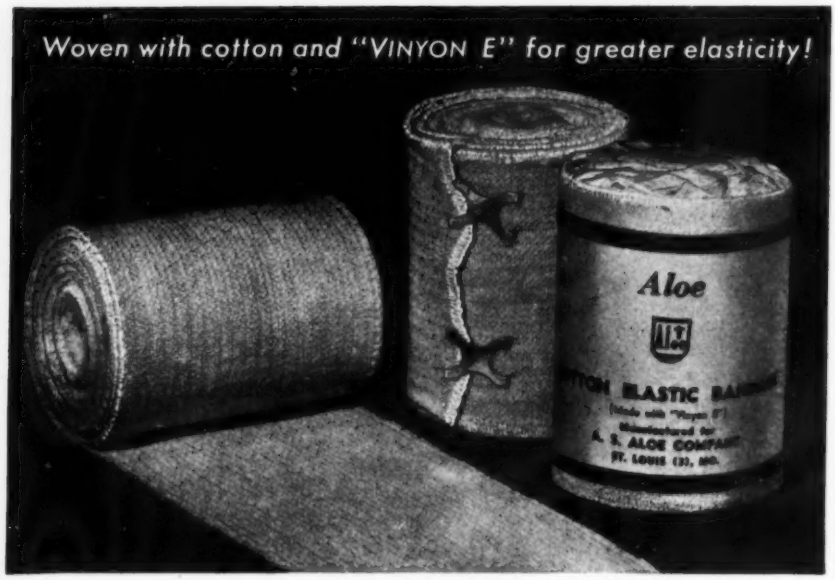
'Tabloid' Registered Trademark

1. Sebrell, W. H., Ann. Int. Med. 15:953, 1941.

## 'TABLOID' YEAST CONCENTRATE

**Preparation: 'Tabloid' Yeast Concentrate, gr. 4 (0.26 gm.) sugar coated. Bottles of 100 and 500.**
**Dosage: Depending on the degree of Vitamin B complex deficiency — 1-3: t. i. d., a. c.**

BURROUGHS WELLCOME & CO. (U.S.A.) INC., 9-11 East 41st Street, New York 17, N. Y.




"ALOE" *Quality Cotton Elastic Bandage*

*Provides even, uniform, steadily maintained pressure—remains elastic*

Aloe cotton elastic bandages are woven of long staple cotton and "VINYON E"—a vinyl resin yarn—which has been found to produce a superior type of elastic bandage because of its natural elasticity. These improved elastic bandages will provide even, uniform, easily controlled and steadily maintained pressure in all conditions where an elastic bandage is indicated. High quality feather-edge prevents binding. Special weave permits free movement, ventilation and circulation. Unlike most other elastic bandages, Aloe cotton elastic bandages with "VINYON E" do not have to be washed daily in order to retain their elasticity. Washing need only be done when bandage becomes soiled. Each size bandage listed below measures approximately 5½ yards when stretched and is furnished with two metal clips in cellophane wrapped and sealed package.

| | Each | Per Doz. |
|---|---|---|
| **HH5934**—Aloe Cotton Elastic Bandage with "VINYON E," 2-inch width | **$0.63** | **$ 6.30** |
| **HH5935**—Same, 2½-inch width | **.76** | **7.65** |
| **HH5936**—Same, 3-inch width | **.85** | **8.55** |
| **HH5937**—Same, 4-inch width | **1.12** | **11.25** |

Aloe A. S. ALOE COMPANY
1831 Olive St. • St. Louis 3, Mo.

which members of the panel answered questions of those attending the meeting. DR. JOHNSON had an article on industrial rehabilitation of veterans in *J. A. M. A.*, December 23, 1944, and his "Cooperative Efforts of the Industrial Physician and the Private Practitioner in Reemployment of Arrested Tuberculosis Patients," appeared in INDUSTRIAL MEDICINE, 14:1, 5, January, 1945.

## New England Conference

THE postponed annual meeting of the NEW ENGLAND CONFERENCE OF INDUSTRIAL PHYSICIANS was held in Boston on February 7, 1945. By invitation from the New England Telephone & Telegraph Company the meeting was held in the Company Medical Office at 245 State Street, and a dinner was served. The speaker of the evening was CAPT. JOHN J. LEPORE, M. C., from Cushing General Army Hospital, Framingham, Massachusetts. He spoke on his landings in Africa, Tunisia and Italy, and of some of his operative work at the hospital since his return to the United States. The idea was to help the industrial physician with the physical and nervous impairments resulting from war injuries so that the physician might plan for proper placement of the handicapped in industry. LT. COMMANDER WILLIAM LANIGAN, Orthopedic Surgeon at the Chelsea Naval Hospital, also spoke regarding the admission of the injured to the hospital. Both talks were very instructive and interesting, and a round table questionnaire followed. The election of officers found JOHN F. KENNEY, M.D., F.A.C.P., the new president, and the other officers and directors as listed on page 14.

## In California

THERE are altogether some 13 bills now before the legislature dealing with various aspects of medical care. The measure proposed by the Congress of Industrial Organizations would create a California health insurance commission on which there would be one physician out of a total of nine members. The state would be divided into areas, in each of which there would be directors, councils, appeal bodies and similar agencies typical of the expansive bureaucracies inevitable under such a plan. Attempts have been made in this proposal to meet the ideas of free choice of physician and fee for service when that is given by specialists. An alternative proposal from Governor Warren of California provides an authoritative body containing 11 members and a manager (all to be appointed by the governor), and this time with two practicing physicians and one experienced in hospital management. In both Governor Warren's proposal and that of the C. I. O. the tax is 1.5% on the employer and a similar amount on the employee. Payment is to be in accordance with a fee schedule adopted by the governing body, with free choice of physician from among such as will register under the act. Governor Warren's measure exempts, both from the benefits and from the taxes, people who depend on healing by prayer. The bill also exempts, both from the benefits and from the taxes, any industrial medical plan which contracts with the authority to continue its work. This would enable the Kaiser plan, for example, to escape the provisions of the act and to maintain its system of practice by a closed group of physicians under contract to the system. The authority given under the governor's proposal to the medical authority which is established is greater than that ever given to any similar group, since it is authorized to expel from practice under the act any physician who intentionally violates any rule or regulation of the authority.

—From an Editorial, "Health Insurance Legislation in California," in *J.A.M.A.*, February 17, 1945.

## In Iceland

THE Icelanders have great respect for American medicine, and American doctors have seen that medical education at the University of Iceland is on a sound basis. General education ranks high in Iceland, and consequently quackery and charlatanism find a meager soil here. Osteopaths and chiropractors do not exist and could not find a means of subsistence. To practice medicine one has to have the university examination and a year's internship in a

## FULL-FLEDGED COOPERATION

MAXIMUM patient cooperation in intestinal bulk therapy is assured by Mucilose, a highly purified hemicellulose which provides *greater bulk* from *smaller doses* at *lower cost*. Published data* show that Mucilose yields much more bulk than other well-known psyllium-base products. Doses are correspondingly smaller, and savings in cost to the patient average 65%.

# Mucilose

## Highly Purified Hemicellulose

**FOR INTESTINAL BULK**

**SUPPLIED** in 4-oz. bottles and 16-oz. containers. Also available as Mucilose Granules, a dosage form preferred by some patients.

Frederick Stearns & Company

*Division*

DETROIT 31, MICHIGAN

NEW YORK • KANSAS CITY • SAN FRANCISCO • WINDSOR, ONTARIO • SYDNEY, AUSTRALIA • AUCKLAND, NEW ZEALAND

### FACTS ABOUT MUCILOSE

**MUCILOSE** is a hydrophilic vegetable colloid composed of the highly purified hemicellulose of Plantago loeflingii.

**LUBRICATING BULK** is provided for gentle stimulation of intestinal peristalsis because approximately 50 parts of water are absorbed to produce a colloidal gel.

**BLAND,** hypoallergenic, and free from irritants, it is also non-digestible, non-absorbable, and chemically inert in the digestive tract.

**INDICATED** in the treatment of both spastic and atonic constipation, and as an adjunct to dietary measures for the control of constipation in aged, convalescent and pregnant patients.

**DOSAGE:** 1 or 2 teaspoonfuls in a glass of water, milk, or fruit juice once or twice daily, followed immediately by another glass of liquid. It may also be placed on the tongue and washed down, or it may be eaten with other foods such as cereals. Ample fluid intake is advisable to assure maximum bulk formation.

*Gray, H. and Tainter, M. L.; *Am. J. Digest. Dis.* 8:130, 1941.

†TRADE MARK MUCILOSE—REG. U.S. PAT. OFF.

# CLINITEST__

**The Reliable and Easy Tablet Test for Urine-Sugar . . .**
**A Standardized Method Requiring No External Heating**

## *Now* STREAMLINED__

**Laboratory, Office and Patient Use**

***Clinitest Laboratory Outfit***

(No. 2108)—*for your office*, complete with tablets for 180 tests, test tubes, rack, droppers, color scale and instructions. Additional tablets can be purchased as required.

***Clinitest Plastic Pocket-Size Set***

(No. 2106)—*for your patients*, all essentials for testing compactly fitted into small, durable "Cigarette-Package Size" kit. Patients will cooperate in keeping up testing routine.

**CLINITEST SAVES TIME AND EXPENSE**

***Order Today from Your Local Supplier***

Write for complete information on the Clinitest Tablet Method and for physicians' prices.

**AMES COMPANY, Inc. • Elkhart, Indiana**


recognized hospital, all of which takes seven or eight years of medical study. If anybody else wants to practice medicine, no matter under how high sounding a title, he is not allowed to advertise or introduce himself under any title but one, which must be on his sign and prescriptions; skottulæknir, which means quack doctor. This legislation solves the whole problem in an easy manner. In direct consequence of this course is the law which prohibits advertising of drugs of all kinds in all papers except those of the medical profession. A systematic search for tuberculosis has just been started in Reykjavik. Every one of Reykjavik's 42,000 inhabitants will be examined by x-ray miniature film equipment, and suspects picked out for further examination. Dr. S. Sigurdsson has been leading the fight against tuberculosis with great success, the mortality being now only 83 against 216 per hundred thousand 15 years ago. This is the first examination of this kind in a European capital, and the start is promising, as everybody seems willing to cooperate. The American influence is making itself more and more felt also in the medical field. Young doctors, who used to go to Denmark and Germany for advanced studies, are now practically all going to the United States, where their admiration and surprise are balanced between the impressive efficiency and high standard of American medicine and the vast amount of quackery thriving in its shadow.

—From "Foreign Letters," in *J.A.M.A.*, February 17, 1945.

### Potatoes

AN OUTBREAK of potato poisoning resulting in skin irritations on the hands of workers in potato dehydrating plants has been controlled in Idaho by institution of protective measures developed by the State Department of Public Health. H. C. CLARE, director of health engineering for the department, said the investigation was made at the request of the state industrial accident board after it had received complaints from workers afflicted with the disease, known as dermatitis. It was found the disease was caused by contact of workers' hands with potato juice and frequent immersions in water. The remedy, after making a study with DR. SAMUEL M. PECK, U. S. public health surgeon: (1) Workers should wear rubber gloves and a protective ointment; (2) should wear impervious sleeves fastening over the gloves at the wrists; (3) should wash their hands in mild soap and warm water after each rest period. Dermatitis effects made "the skin appear red and scaling, and as the disease developed the skin would become more irritated and show various signs of maceration and pocking."

—*Boise Statesman*, February 8.

### Safety Chart Series

VERNE A. ZIMMER, Director, Division of Labor Standards, U. S. Department of Labor, calls attention to a series of Industrial Safety Charts, which his Division is putting out in cooperation with *Mill & Factory*. These are to promote safe working practices around common types of industrial equipment. Series A, on drill presses, the first in the series, is now available. Subsequent issues, to be published monthly, will cover circular saws, power trucks, lathes and other types of industrial equipment. The series will continue indefinitely. These charts are designed to be particularly useful in employee training and educational programs, for mounting on bulletin boards, for reproduction in house organs and trade publications, and in safety training manuals and other related ways. They are strikingly drawn and effectively printed in color. Copyright restrictions have been waived so that the charts may be reproduced, enlarged or used in any manner that will make them more effective. They may be obtained in any one of the following ways: (1) They can be reproduced by any organization with or without credit to *Mill & Factory* and with the name of any organization on the charts. (2) They can be purchased from *Mill & Factory*, 205 E. 42d Street, New York 17, with or without the name of any organization on them. They are available at what amounts to cost price. (3) They can be obtained by purchase from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. It is urged that all interested agencies, industries, schools, shops, safety groups, etc. make use of this material and that efforts be made to get it used in all school shops and industrial plants. Comments and suggestions for future issues should be mailed to the Divi-

# Always PRECISION-TESTED B-P SURGICAL KNIFE HANDLES

IN MANY RESPECTS the inherently superior qualities built into every Bard-Parker Knife Handle are as important to the surgeon as the comparable qualities which have established Rib-Back Blades as the finest cutting edges obtainable.

B-P Handles are outstanding for durability. They are meticulously checked for weight, balance, finish . . . and most essential—a capacity to accurately and firmly accommodate every B-P blade purchased for component use.

Distinguishable from other available handles, the distal ends of genuine B-P Handles are scientifically tapered and beveled to a Gothic Arch pattern for practical and time-conserving use in blunt dissection.

**SPECIAL HANDLES INCLUDE:**

NOS. 3L AND 4L . . . Elongated Handles for use in deep surgery.

NO. 3L OFFSET . . . An offset elongated Handle for use in hysterectomies.

NO. 9 . . . A small, well balanced Handle especially suitable for eye and plastic surgery, and for general minor surgical practice.

*Ask your dealer* **BARD-PARKER COMPANY, INC.** Danbury, Connecticut

A BARD-PARKER PRODUCT

THE INSTRUMENT OF CHOICE!

Physicians have long recognized in the Baumanometer the consistent accuracy that is indispensable to trouble-free bloodpressure work. Many exclusive features contribute to this universal popularity of the Baumanometer. Little wonder it has become the instrument of choice . . . actually *hundreds of thousands of times*. The practicing physician or Service doctor returning to civilian practice should demand the proved advantages that this true mercury-gravity apparatus provides.

The KOMPAK Model for instance . . . the optimum in compactness, lightness and accurate lifetime performance. Admittedly the ideal instrument for office use and out-calls, it requires a minimum of drawer, desk or bag space, and whenever bloodpressure readings are indicated, its accuracy is indisputable.

W. A. BAUM CO. INC. NEW YORK
ORIGINATORS AND MAKERS OF BLOODPRESSURE APPARATUS EXCLUSIVELY

Lifetime Baumanometer
STANDARD FOR BLOODPRESSURE

*Get the **FACTS** and you will buy a Lifetime Baumanometer*

sion of Labor Standards, U. S. Department of Labor, Washington 25.

### Cash Benefit Plan Unsound

IN VIEW of the fact that legislation is now being considered in Minnesota calling for cash benefits during sickness as part of the state's social security system, a recent report of one full year's experience with a cash benefit system in Rhode Island is highly significant. It is reliably reported that the Rhode Island plan is already financially unsound, that in 19 months of benefit payments not enough had been added to the reserve fund to pay out a single week's benefits at present rates. Rhode Island is the first state to add cash sickness benefits to its social security structure. It is one of only four states where employees contribute to the unemployment insurance fund. The unemployment insurance fund mounted during the war period and the cash benefit plan was instituted without great opposition as an alternative to possible demands for reduction of the employee tax. Collections of contributions to the cash benefit fund began seven months before benefits were paid. At that time, April 1, 1943, the reserve fund amounted to $2,659,937.33. By October 31, 1944, after 19 months of benefit payments, only $98,747 had been added to the reserve and it is estimated that the fund will be totally exhausted at the end of about two and one half years, if present benefit rates are continued. This early threat of financial collapse in a period of full employment appears to stem mainly from employee-abuse. From April 1, 1943, to March 13, 1944, benefits averaging $119 were paid to one out of every eight wage earners covered by law. The trend of benefit payments was constantly upward and, contrary to general experience, the payments reached the lowest point in December, January and February and the highest point in May, June and July. Pleasant summer days appear to have played some part in this reversal of ordinary sickness experience, especially in view of the fact that no epidemics were reported during the period in Rhode Island. Prosecution of violators of provisions of the act has been stepped up, it is reported. After two sentences had been passed by the courts, $3,500 was returned by persons who appeared to have obtained benefit payments illegally. An investigation is now under way, it is said, on 2,000 cases in which beneficiaries are under suspicion of having received wages for weeks during which sick benefits were also collected. Initially, certification of eligibility was left in the hands of the worker's private physician. The doctors, themselves, did not ask for this provision and were not consulted at any point during the passage of the legislation. From the start they feared the pressures that might be brought to bear upon them by patients. Subsequent events showed their fears to be justified and the plan was modified to provide for special medical boards to assist in the work of certification. Abuses which marked the later months of the year cannot therefore be charged to collusion of physicians.

—Medical Economics Section, *Minnesota Medicine*, February, 1945.

### Lemon Powder

A VERDICT in favor of General Foods Corporation of Hoboken was rendered by a jury in Federal Court in the $60,000 damage suit brought by Mrs. Mary Fabris, of Hoboken, former employee of the company, for an illness she stated, resulted from her employment in the company's factory. While working in the factory, in 1942 and 1943, she was obliged to come in contact with lemon powder, which she says caused her to develop an annoying skin condition and rash. Later a neurosis caused by the dermatitis resulted in her giving up employment and she has been unable to work since.

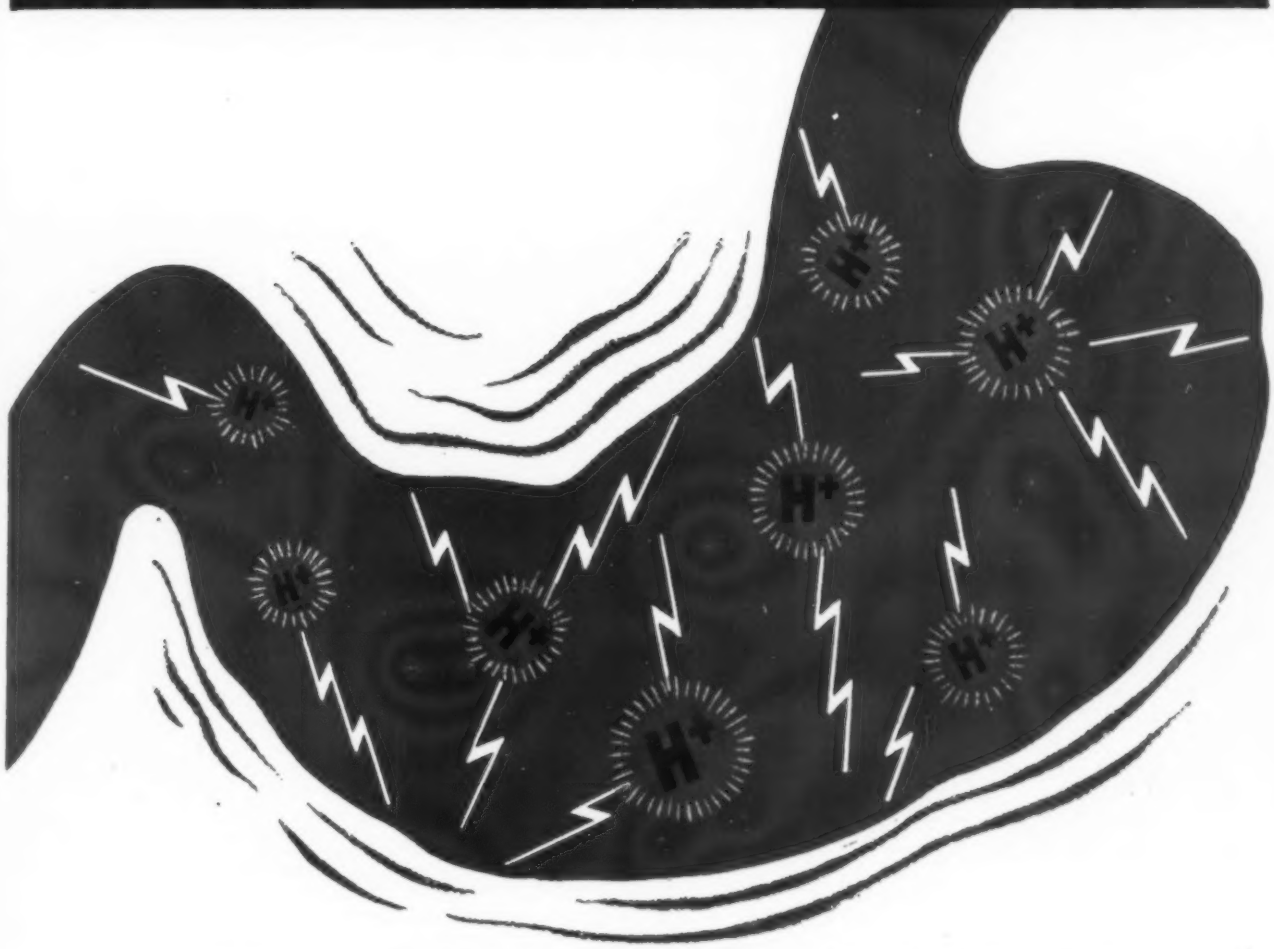
—*Hoboken Jersey Observer*, February 12.

### Pacific Foundation

PACIFIC Industrial Hygiene and Research Foundation, Los Angeles (INDUSTRIAL MEDICINE, November, 1944) is offering its members (1) the installation of "good housekeeping"—through plant surveys and studies of processes and facilities; (2) tests of the working environment and laboratory analyses of air, dust, and other samples; (3) practical suggestions regarding the elimination or control of hazards; (4) studies of noise, lighting, sanitary and other environmental conditions; (5) access to the facilities of a completely equipped industrial hygiene laboratory, collaborating

—*Continued on page 208.*

# TO CALM THE *Angry Stomach*




FORMS an adsorptive, protective medium which buffers excess acidity without alkalosis or acid rebound.

Provides prompt, prolonged relief from pain due to peptic ulcer, heartburn, gastric hyperacidity and alcoholic gastritis.

LUDOZAN is not constipating. Available in palatable, convenient form as 1 Gm. LUDOZAN* Tablets plain and LUDOZAN Tablets with Belladonna, or as 3 Gm. powders.

LUDOZAN

*Trade-Mark Reg. U. S. Pat. Off.

COPYRIGHT 1945 BY SCHERING CORPORATION

SCHERING CORPORATION BLOOMFIELD, NEW JERSEY

*Consider*

**THE COLON**

At least 80% of all arthritics (according to outstanding authorities) present ptosis, dilatation and/or atony of the colon, with functional impairment.

To combat such gastro-intestinal dysfunction through thorough systemic detergence Occy-Crystine is widely employed because of its effectiveness in promoting: *prompt relief* of colonic stasis . . . *marked improvement* of liver and gallbladder functions . . . *stimulation* of renal clearance of toxins . . . and *release of colloidal sulfur*, so frequently deficient in the arthritic economy. Include Occy-Crystine as an adjunct to treatment of your next few cases of arthritis.

FORMULA: Occy-Crystine is a hypertonic solution of pH 8.4, made up of the following active ingredients: Sodium thiosulfate, and magnesium sulfate, to which the sulfates of potassium and calcium are added in small amounts, contributing to the maintenance of solubility.

**OCCY-CRYSTINE**

*— the sulfur-bearing saline detoxicant-eliminant*

OCCY-CRYSTINE LABORATORY • SALISBURY, CONN.

Send FOR CLINICAL TRIAL SAMPLES

OCCY-CRYSTINE LABORATORY, Salisbury, Conn.
Please send clinical trial samples of Occy-Crystine. IM-3
Dr.
Address
City State

Public Library
Detroit, Michigan

**THE MIND OF THE INJURED MAN**

**A Study of Trauma and the Nervous System, with Particular Reference to Neuroses Associated with Injury**

**by Joseph L. Fetterman, M.A., M.D., Assistant Clinical Professor of Nervous Diseases, Western Reserve University School of Medicine, Cleveland, Ohio**

"The reading of this manuscript has been an interesting and informing experience, which I hope will be shared by many. This is not just a book, it's a very good book!" —Foster Kennedy. Cloth, 6x9, 270 pages, 28 illustrations, bibliography, index. Price $4.00.

**Pruritus Ani**

By Charles J. Drueck, M.D., F.A.C.S.
238 pages; 30 illustrations

Sixty per cent of the adult population is said to be afflicted with pruritus perinei and yet the bedside physician does not know how to handle it. This important book is the first comprehensive monograph on this complex and distressing affliction. Published in 1938 at $5.00—Now..$3.00

**INDUSTRIAL MEDICINE BOOK COMPANY**

**605 N. Michigan Ave., Chicago, Illinois**


## COMMENT and OPINION

### "Even Thou Art a Little Queer"

ANNOUNCING a luncheon talk to be given by DR. RUDOLPH NOVICK, of the Illinois Society for Mental Hygiene, February 15, a newspaper item said: "DR. NOVICK will present statistics to show that 20 to 30% of all employed persons have some mild mental disorders, leading to ineffectual activity, and higher accident rates."

### Absenteeism

THE effect of the midnight curfew of entertainment spots on the absentee rates among Chicago war plants was still indefinite today, but one plant reported a 30% decrease over a week ago. . . . Zenith Radio Corporation reported a tremendous drop in absenteeism over last Tuesday in a spot check of their plant. A check of the 8:00 A.M. shift at Western Electric showed little change over the previous week. . . . William H. Spencer, regional WMC director, cited figures to show that elimination of absenteeism would solve the Chicago area manpower shortage. . . . At the same time, Victor A. Olander, secretary and treasurer, Illinois State Federation of Labor, said that if the WMC would supply detailed figures on absenteeism, by plants and departments, to the unions, the unions themselves would undertake to reduce absenteeism to a minimum.

—Chicago news items.

### Medicine and Surgery Plus

INDUSTRIAL concerns and insurance companies are beginning to realize the importance of medical care that goes beyond hospital medicine and surgery and includes convalescent care and industrial rehabilitation. Howitt has described a center in England constructed on the lines adopted for army practice. Aitken, Coulter, Zeiter and others have reported similar set-ups established in this country. Both physical and occupational therapy are extensively employed, particularly in the early stages after injury. Activities are later directed toward vocational guidance and placement in jobs appropriate for the degree of handicap. The program of the Caterpillar Tractor Company, which includes job analysis and provides employment for 800 handicapped employees, is an outstanding example of success in rehabilitation.

—From "Physical Medicine in Rehabilitation," by ARTHUR L. WATKINS, M.D., in *New England J. Med.*, February 15, 1945.

### Advance of Hygiene

OUR great-grandfathers were savages, and hygiene is a nursling of the last 50 years." Even after the close of the Middle Ages etiquette ruled the propriety of blowing the nose with the hand that did not hold the meat. From the grand seigneurs down everybody was begrimed with dirt and, of course, infested with the itch mite and the louse. Kings stank like carrion. The coiffures of eighteenth century ladies were nothing but vermin traps. Even as we approach the nineteenth century the state of the hospitals in Europe was incredibly bad. With no heat, patients suffered from frostbite, and were oftentimes huddled six in a bed with various diseases, including smallpox. Sanitation was held to be far advanced when an annual burning of mattresses was adopted.

—*Clinical Medicine*, February, 1945.

### Common Cold

IT MAY be argued that the virus cold is true common cold and that the frequent recurring cold is due to sinus activity and is no cold at all. There would be no quarreling with this viewpoint except that, given a patient with a cold it would be impractical to use elaborate culture methods to determine whether a virus is involved. Furthermore, little purpose is served when, as all admit, the streptococcus is the cause of the complications. CONCLUSIONS: (1) The common cold is not a single entity, due invariably to a virus as popularly believed. (2) By far the most common cause of the common cold is the hemolytic streptococcus. Such colds in the main are acute exacerbations of a chronic sinusitis and usually follow chilling. They are accompanied by dissociation of the ubiquitous viridans streptococcus into the hemolytic streptococcus. This type of cold may be prevented by the bacteriostatic action of daily doses of sulfadiazine, which probably prevents conversion of the viridans into the hemolytic streptococcus. (3) Of considerably lesser incidence are the colds caused by virus, and those due to allergy. (4) Two strong arguments exist against the virus etiology of colds, especially the frequently recurring cold: (a) the long period of immunity known to exist following virus colds; children frequently have several colds during this period; (b) the striking reduction in number of colds in patients taking prophylactic daily doses of sulfa drugs known to be ineffective in virus diseases. (5) The very common type of cold that follows chilling cannot be explained by a virus. One would have to assume that the virus is already resident in the upper respiratory tract of large populations who come down with colds simultaneously during chilling weather. Such virus has not been found; the streptococcus has.

—From "Common Cold Not Caused by Virus," by CAPT. EDWARD E. BROWN, in *Northwest Medicine*, February, 1945.

# petrolatum a prompt covering dressing...effective against potential infection and burn pain.

Nature heals the burn. But medical science, through the bitter experience of war and civilian disaster, has now developed a new treatment for creating optimal healing conditions.

Together with plasma and internal chemotherapy, petrolatum . . . known widely as 'Vaseline' Petroleum Jelly . . . is important in this new care of burns, as a covering dressing against invasive bacteria . . . soothing . . . non-irritating to cells. Effective against burn pain . . . covering exposed sensory nerve endings.

**'VASELINE' PETROLEUM JELLY IS PETROLATUM U.S.P.**

In a study of 5,609 minor industrial burns[1], when 84 different methods of burn treatment were used, it was found that burns treated with simple petrolatum healed in an average shorter time, and required average fewer dressings, than did burns treated with all other preparations observed.

'Vaseline' Petroleum Jelly, for covering burn surface wounds and for impregnating gauze dressings, is available at drug stores everywhere . . . in tubes and jars. 'Vaseline' Borated Petroleum Jelly in tubes only.

1. J.A.M.A. 122:909 (July 31) 1943

**Vaseline**
REG. U.S. PAT. OFF.
PETROLEUM JELLY

MADE ONLY BY CHESEBROUGH MFG. COMPANY, CONS'D, NEW YORK, N. Y.

*Inject* Metrazol intravenously in respiratory and circulatory emergencies, collapse, deep anesthesia, barbiturate poisoning and acute alcoholism.

Metrazol Ampules
1 cc. and 3 cc.
Tablets
Oral Solution
Sterile Solution
Powder

COUNCIL ACCEPTED

Metrazol, T. M. reg. U. S. Pat. Off.

BILHUBER-KNOLL CORP. - ORANGE, NEW JERSEY

### Brown University

THE Extension Course in Industrial Health and Hygiene, by the Department of Medical Sciences of Brown University, comprising 12 sessions, Spring Term, 1945 is offered by the Department (DR. CHARLES A. MCDONALD, chairman) in cooperation with the Committee on Industrial Health, Rhode Island Medical Society; the Rhode Island Society of Industrial Physicians and Surgeons (DR. CHARLES L. FARRELL, President and DR. JAMES P. DEERY, Secretary), and the Rhode Island Industrial Nurses' Club (HELENA MAHONEY, R.N., President). The course has the following lecturers and subjects:

February 20: "Bases of Industrial Medical Practice"—DWIGHT O'HARA, M.D., Acting Dean and Professor of Preventive Medicine, Tufts Medical School.

February 27: "Labor Management Relationships in Industrial Health Programs"—J. J. BLOOMFIELD, Senior Engineer, U. S. Public Health Service, Chief, Field Operations Section, Division of Industrial Hygiene.

March 6: "Physical Examinations"—HARVEY BARTLE, M.D., Chief Medical Examiner and Medical Director, Pennsylvania Railroad.

March 13: "Absenteeism in Industry"—JOHN J. WITTMER, M.D., Personnel and Medical Director, Consolidated Edison Company of New York.

March 20: "Coordinating Industrial Medicine and Industrial Hygiene in Modern Industrial Practice"—C. O. SAPPINGTON, M.D., Dr.P.H., Editor INDUSTRIAL MEDICINE; Industrial Health Consultant, Chicago, Illinois.

March 27: "Industrial Skin Diseases"—LOUIS SCHWARTZ, M.D., Medical Director, U. S. Public Health Service; Chief, Dermatoses Section, Division of Industrial Hygiene.

April 3 "The Profits in an Industrial Health Program"—WM. A. SAWYER, M.D., Medical Director, Eastman Kodak Co.

April 10: "Industrial Medical Department Relationships with Medical Profession and Outside Agencies"—EDWARD C. HOLMBLAD, M.D., Medical Director, Railway Express Agency.

April 17: "Industrial Nursing Consultation from the Insurance Viewpoint"—MRS. IRENE WILLOUGHBY, R.N., Industrial Nursing Consultant, Liberty Mutual Insurance Company.

April 24: "The State Department of Labor and the Workers' Health"—WILLIAM J. CONNOLLY, Director, R. I. State Department of Labor.

May 1: "The Work of the Nurse in Industry"—MISS CATHERINE R. DEMPSEY, R.N., Director of Nurses, Simplex Wire and Cable Company.

May 8: "In-Plant Training for the Industrial Nurse"—MR. JESSE C. WILLIAMS, R.N., Director of Nurses, Pratt and Whitney Aircraft Division, United Aircraft.

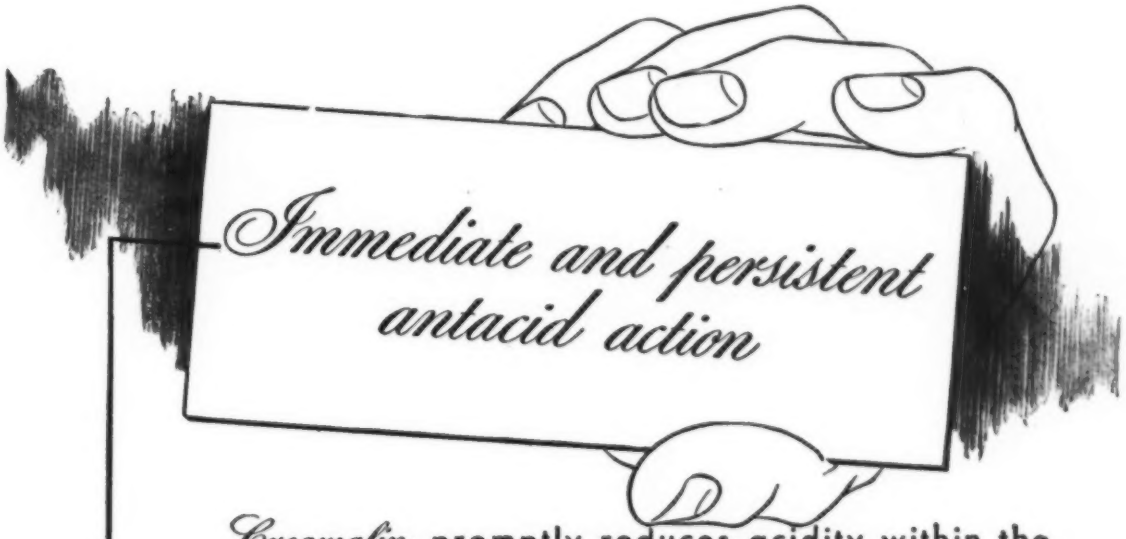
### The Medical Administrator

CERTAINLY at one time during the last 30 years the medical profession and the British Medical Association seemingly accepted the plan of compulsory health insurance; perhaps passive resignation to the act is more accurate phraseology. But more recently vigorous objection is being voiced. A Scottish physician entirely unconsciously illustrated some of the draw-backs and weaknesses of the act when he assured me that he liked the plan. The reason he gave was that after years of hard work the doctor had something that he could sell when and if he was minded to retire. Naturally, I asked him if a physician could turn over his panel patients in that fashion. Of course, said he, if one stood in well with the administrator, who ordinarily is not a doctor. I did not think it was appropriate to ask how one stood in well with the administrator, but did venture to ask about the application of the principle of freedom of choice on the part of the panel patients. He put me in my place emphatically and profanely for my visionary foolishness in regard to my next query which concerned what would happen if the purchaser proved to be incompetent. The Scottish physician was a man of some importance in his community and in the profession. His remarks were sadly substantiated by other physicians, who, as doctors are wont to do, retailed their own pet grievances. A common grievance was that the administrator was often arbitrary in refusing approval of expensive drugs. As we all know, some doctors prescribe preparations of drugs that are expensive when inexpensive preparations may be just as good or even identical.

—From "What Abouut Health Insurance," by ROGER I. LEE, M.D., in *New England J. Med.*, February 15,, 1945.

### Deteriorating in Line of Duty

DR. EMMET B. LAMB, medical director, Allison Division, General Motors, addressing a meeting of the Wayne County Medical Society and the Richmond, Indiana, Personnel Association, February 15, as reported in *Richmond Palladium Item & Sun*, February 16: "Another factor adding to neurosis is the 'breakdown of manners, DR. LAMB stated. He said he could remember when it used to be the proper thing for a man to stand up and give his seat to a woman on a bus, but that in these times there has been a breakdown of manners. Women who have to travel many miles in order to get to work, are sometimes forced to stand the entire distance. This, too, he said, was a cause of industrial neurosis. He pointed out the fact that we are seeing more and more



*Immediate and persistent antacid action*

*Creamalin* promptly reduces acidity within the stomach. The antacid effect is persistent. There is no local compensatory reaction, such as commonly occurs with alkalies, and hence no belated oversecretion of hydrochloric acid. Moreover, there is no risk of producing alkalosis.

*Creamalin* promptly relieves pain and heartburn associated with gastric hyperacidity.

*Creamalin* often induces healing of peptic ulcer when employed with an ulcer regimen.

*agreeable to taste*
*convenient to carry and to take*
*efficient in action*

**CREAMALIN**

Reg. U.S. Pat. Off.
Brand of ALUMINUM HYDROXIDE GEL
**TABLETS**

ARMY E NAVY
WINTHROP

WINTHROP CHEMICAL COMPANY, INC.
*Pharmaceuticals of merit for the physician*
NEW YORK 13, N. Y. WINDSOR, ONT.

*"Certainly the place . . . to attack the metabolism of bacterial growth . . . is in the locality where that growth occurs."**

*Fenton, Ralph A.:
"Local Use of Sulfathiazole
in Otolaryngologic Practice",
Arch. Otolaryng., 37:491, 1943.

# Local Chemotherapy with

White's

# SULFATHIAZOLE GUM

Chewing even a single tablet provides a high, *sustained* salivary concentration of *locally active* sulfathiazole, averaging 70 mg. per cent over a full hour's chewing. Yet *blood levels* produced by even maximal dosage—and even in children—are for the most part too low to be quantitatively measurable. More effective *local* chemotherapy is thus made possible, while *systemic* toxic reactions are virtually obviated.

**INDICATIONS:** Septic sore throat, acute and chronic tonsillitis, pharyngitis, infectious gingivitis and stomatitis, non-epidemic infectious parotitis, peritonsillitis—caused by sulfonamide-susceptible micro-organisms. Preliminary studies indicate that Vincent's disease heals within 48-72 hours following start of treatment.

**DOSAGE:** One or two tablets of White's Sulfathiazole Gum chewed *for one-half to one hour* at intervals of one to four hours, depending on severity of condition. Should patients (children, for instance) find difficulty in chewing a single tablet for one-half to one hour, as many tablets as desired may be successively chewed during the period.

*Available*

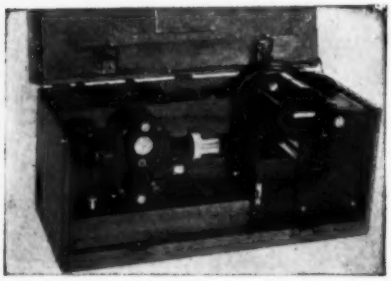
IN PACKAGES OF 24 TABLETS, SANITAPED IN SLIP-SLEEVE PRESCRIPTION BOXES —ON PRESCRIPTION ONLY.

A product of *White Laboratories, Inc.*

Pharmaceutical Manufacturers, NEWARK 7, N. J.

FROM THE SOUTH PACIFIC

A prominent New York Cardiologist now a Captain in the Navy Medical Corps writes us from a naval medical base in the South Pacific, *"We're giving our machines, two Cambridge Simpli-Trols, the workout of a lifetime. We're taking about 30 tracings a day, a third of them as exercise tests so that we're doing the equivalent of 40 to 50 ordinary records. This with the fact that we haven't a single experienced technician gives you an idea of what the machines have had to take."*



THE "SIMPLI-TROL" PORTABLE MODEL. MOBILE AND STATIONARY MODELS ALSO AVAILABLE

Yes, we know the *Cambridge* can take it. It is a rugged instrument, convenient and simple to use. The accuracy of Cambridge records is recognized by the entire medical profession . . . everywhere.

When you select a *Cambridge*, you have chosen the finest Electrocardiograph that can be built, an instrument that will give you a lifetime of satisfactory service.

*Send for descriptive literature*

BUY WAR BONDS
*"a loan . . . not a gift"*

CAMBRIDGE INSTRUMENT COMPANY, Inc.
3732 Grand Central Terminal, New York 17, N. Y.
*Pioneer Manufacturers of the Electrocardiograph*

CAMBRIDGE
*all-electric*
ELECTROCARDIOGRAPH

broken homes and child neglect, evidence of an apparent departure from morals. In turn, he said, these things cause labor to blame industry for the change in the mental attitude of workers. In pointing out things which cause neurosis, DR. LAMB said readjustment in the economic field was another factor. Under the present wartime conditions many wives were forced to discharge servants, or break up their homes when the husband was called to service, and many took on extra jobs, jobs they never dreamed they would have to do. Many are unable to stand the added strain and if not given the proper job, one which doesn't exceed their mental capacities, will break down. He pointed out that a means of rehabilitating workers who suffer industrial neurosis was going to have to be sought by doctors and personnel managers. In quite a few cases, DR. LAMB stated, breakdowns were caused by the persons receiving word of the death of their soldier friends and relatives. He listed three major classes of workers, each requiring different considerations when being employed. These are persons seeking primary employment, re-employment, and returning war veterans seeking positions. He asked, 'what shall we do with men deteriorating in their line of duty?' Industry, he said, must have men. All personnel managers are aware of the fact that they are working with a lot of queer people now, he pointed out. He is of the opinion that doctors not only should examine prospective employees physically, but should give summary talks, heart-to-heart talks, even if only for a few minutes, in order to learn what makes the 'queer man queer.' He told of the need for careful study and consideration for returning veterans, pointing out that although these same fellows might not have done so well in civil jobs, often times being in the service for a time, develops their personality and qualifications. 'In many cases you can't see anything in the person's makeup that would suggest a possible breakdown, but sometimes something queer pops out under certain conditions.'"

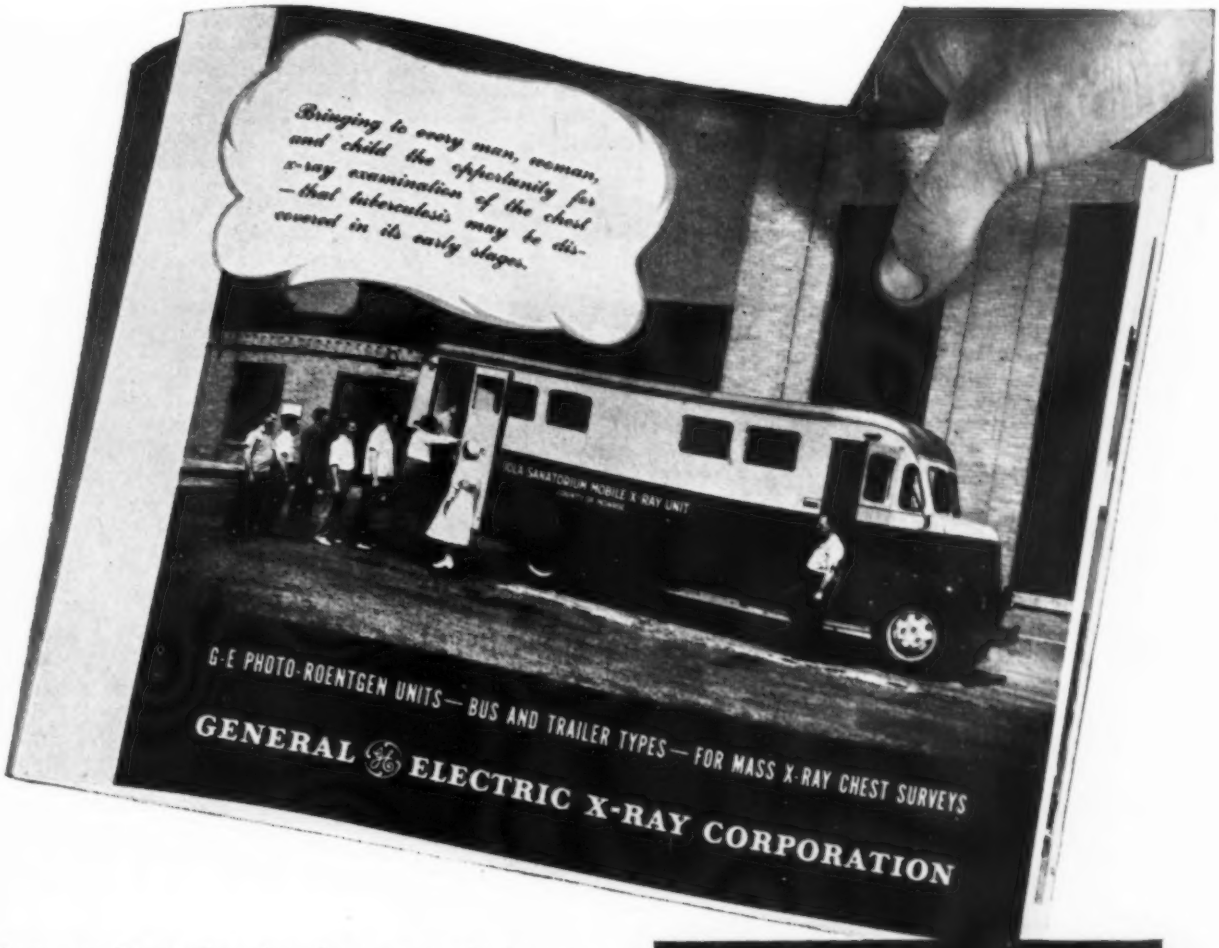
### Flight Surgeon

MOST of the Flight Surgeons are an enthusiastic lot. "Doc" gets homesick sometimes and down on his luck. He has many duties which are pretty tedious chores to a physician of his caliber. . . . He worries about his practice and whether it will come back to him after he returns. And the rule that sends the fliers home after a certain period of service doesn't apply to him. He tells himself, however, when he gets depressed, that he is doing a job that few others would do. And he is right. Primary service rendered by these men is measured solely in our pilots' psychology.

—*Ciba Symposium*, February, 1945.

### Industry and Education

INDUSTRY and education are anticipating cooperation on a larger scale to develop graduates meeting the requirements of both citizenship and industrial employment. Successful conferences between industry and education have been held in this country's major industrial cities during the past year. These discussions have brought into focus the differences between basic education and intensive special training, revealed unexpected common ground, and indicated the ways in which cooperation may be extended. Various educators at the conferences described as the aim of education the preparation of the student so that he will live a complete life and assume actively the obligations of citizenship. Industry emphasized its needs for men and women with this basic education plus a willingness to work and an ability—preferably a proficiency—in some field. Both groups agree that training to achieve both these aims should be available to all. The immediate problem lies in preparing the student for a job where he is needed, while preserving or extending his liberal education. One industrialist has suggested that the schools' enrollment in vocational courses be keyed to the needs of the locality in particular trades. If a mechanism for cooperation between


Bringing to every man, woman, and child the opportunity for x-ray examination of the chest —that tuberculosis may be discovered in its early stages.
G-E PHOTO-ROENTGEN UNITS— BUS AND TRAILER TYPES— FOR MASS X-RAY CHEST SURVEYS
GENERAL ELECTRIC X-RAY CORPORATION

If you are formulating plans for an x-ray chest survey aiming to reach every person within a circumscribed geographic area, you'll be interested in this brochure.

Here you'll find valuable information about G.E.'s Mobile X-Ray Units, both bus and trailer types, which make it possible to conveniently extend the benefits of this service to the remotest parts of a given survey area.

For a number of years G.E.-equipped traveling x-ray units have been establishing outstanding records of reliable, efficient performance for health departments and tuberculosis organizations in all sections of this continent. Surely, this has meant a lot of experience in development, all of which is reflected in our latest improved models, designed to best meet your requirements.

To get all the facts, mail coupon today for this attractively illustrated brochure.

**TO HELP PLAN YOUR X-RAY CHEST SURVEY**

Please send the brochure on G-E Mobile Chest X-Ray Units.

Name_____

Address_____

D13

**GENERAL ELECTRIC X-RAY CORPORATION**

2012 JACKSON BLVD. CHICAGO (12), ILL., U. S. A.

1895 OUR FIFTIETH YEAR OF SERVICE 1945

Public Library
Detroit, Michigan

industry and education to this end could be worked out, the schools would no longer provide too many graduates trained in one trade and too few in another. Industrialists suggested improved instruction in the relationship between an individual's education and his work; present sociology and economic courses are said to deal too closely with theory. Many educators and industrialists feel that work-study arrangements whereby students can acquaint themselves with business practices and responsibilities during a work period of a few weeks, alternated with school periods of equal length, are desirable and should be more common. It may be expected that one result of the conferences will be a working plan for more intelligent reconciliation of education's aims and industry's needs. A second suggestion for vocational and professional training involves an expansion of industry's own training programs. Leaving the basic education to the school system some of the larger companies, particularly in the automotive field, have established comprehensive technical education programs. The General Motors Institute, The Chrysler Industrial Education Department, and The Chrysler Institute of Engineering are examples of schools wherein qualified personnel may be trained in the quantities and at the time when needed. At General Motors, for instance, a newly promoted foreman learns the relation of his job to the entire industry as well as receiving instruction on his new duties. In these institutes, also, skilled labor can be trained in new techniques to fill newly created vacancies, or promising high school and college graduates may be specially trained for positions of leadership in the firm; even professional degrees are offered in some instances. Under this plan, with industry assuming responsibility for vocational and professional training, it would be possible for the school system to increase its emphasis on liberal education. While complete assumption of the responsibility for vocational and professional training by industry would seem to be impractical, it is currently receiving increasing attention from both groups.

—*Industrial Bulletin* of Arthur D. Little, Inc., February, 1945.


Rx DESITIN OINTMENT

*The External Cod-Liver Oil Therapy*

**USED EFFECTIVELY IN THE TREATMENT OF**

**Wounds, Burns, Ulcers, especially of the Leg, Intertrigo, Eczema, Tropical Ulcer, also in the Care of Infants**

Desitin Ointment contains Cod-Liver Oil, Zinc Oxide, Petrolatum, Lanum and Talcum. The Cod-Liver Oil, subjected to a special treatment which produces *stabilization* of the Vitamins A and D and of the unsaturated fatty acids, forms the active constituent of the Desitin Preparations. The first among cod-liver oil products to possess unlimited keeping qualities, Desitin, in its various combinations, has rapidly gained prominence in all parts of the globe.

Desitin Ointment is absolutely non-irritant; it acts as an antiphlogistic, allays pain and itching; it stimulates granulation, favors epithelialisation and smooth cicatrisation. Under a Desitin dressing, necrotic tissue is quickly cast off; the dressing does not adhere to the wound and may therefore be changed without causing pain and without interfering with granulations already formed; it is not liquefied by the heat of the body nor in any way decomposed by wound secretions, urine, exudation or excrements.

**DESITIN POWDER**

*Indications:* Minor Burns, Exanthema, Dermatitis, Care of Infants, Care of the Feet, Massage and Sport purposes.

Desitin Powder is saturated with cod-liver oil and does not therefore deprive the skin of its natural fat as dusting powders commonly do. Desitin Powder contains Cod-Liver Oil, (with the maximum amounts of Vitamins and unsaturated fatty acids) Zinc Oxide and Talcum.

Professional literature and samples for Physicians' trial will be gladly sent upon request.

*Sole Manufacturer and Distributor in U. S. A.*

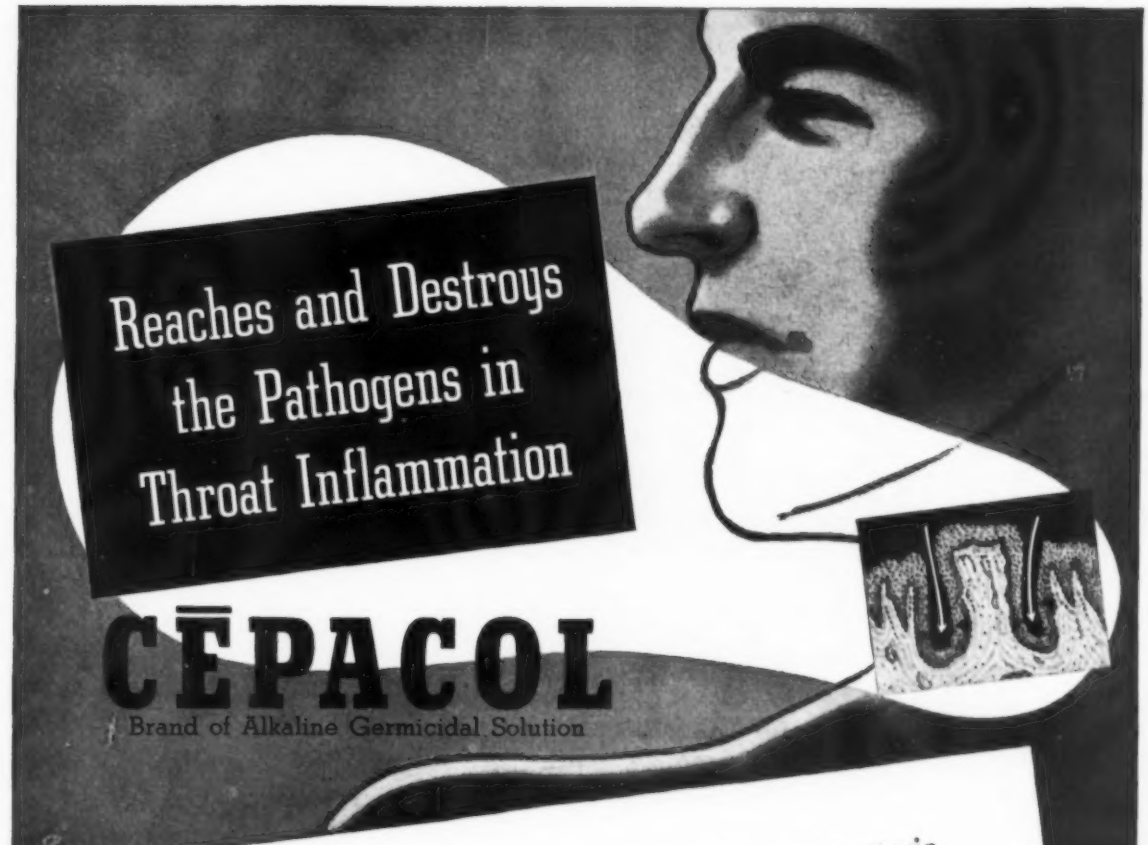
DESITIN CHEMICAL COMPANY

70 SHIP STREET PROVIDENCE, RHODE ISLAND


## Noise

IMPAIRMENT of hearing is the most alarming and tragic consequence of exposure to excessive noise. The firing of 25 shots from a 32-calibre revolver in rapid succession near the writer's right ear, induced a temporary hearing loss of 20 db for high pitched tones. Long continued exposure of this nature would cause permanent and severe loss of hearing. A single, violent explosion may rupture the eardrum, drive the stirrup into the internal ear, and destroy all useful hearing. The explosion of a single land mine in the Middle East ruptured the eardrums in one or both ears of 60 Indian troops. Hundreds of thousands of our own troops may be the victims of similar fates. . . . "IT IS TRUE," says the McCoy Health Service, of Los Angeles, "that a human being may waste an enormous amount of energy by listening to distracting noises. The effect upon the nervous system is apparently more marked in those who are naturally of a high strung, nervous temperament, but even the placid individual will in time notice that he is annoyed by needless clatter. Scientific experiments have determined that loud noises will arouse fear in infants and it seems as though the fear of noise is one of the two natural fears with which we are born. After we grow up, unexpected noises probably still have the power of stirring up a fear reaction within the body, even though we are not conscious that we are reacting in just that way. Other experiments indicate that continuous noises create fatigue and reduce efficiency. In the larger cities, noise is a distinct problem because of the concentration of industry. Especially in offices where many are working together and where the racket of typewriters and telephones add their contribution, the noise problem is very acute" . . . . "PRACTICALLY the entire medical profession," says William S. Miles in a recent issue of *Coronet* magazine, "agrees that noise constitutes a grave menace to the physical and mental life of the nation," citing several tests and experiments to prove that noise lessens the power to concentrate, throws a great strain on the nervous system, increases blood pressure and slows the digestive processes.

—*News Bulletin*, National Noise Abatement Council, February 15.



Reaches and Destroys the Pathogens in Throat Inflammation

CĒPACOL

Brand of Alkaline Germicidal Solution

Cēpacol is rapidly effective against pathogenic bacteria associated with sore throat, and at the same time, acts as a mildly alkaline cleansing solution that allays irritation and soothes inflamed tissues.

Due to unusually low surface tension, recesses of the mucosa are reached by Cēpacol and cleansed by its foaming detergent action. In clinical use it is nontoxic, nonirritating, nonastringent, and does not interfere with healing.

Cēpacol can be used as spray or gargle, full strength or diluted with an equal volume of water. Its delightful, refreshing flavor invites cooperation by the patient.

*At prescription pharmacies in pints and gallons*

Trademark "Cēpacol" Reg. U. S. Pat. Off.

MERRELL

117th Year

THE WM. S. MERRELL COMPANY · CINCINNATI, U. S. A.

### Gross and Net

MAKING sure that the employee is on the job every day does not guarantee that a full day's work is always performed. Employees, like profits, can be gross and net. One must measure the actual net hours of their combined work. One must make sure that sullen and shirking employees are not allowed to affect the work of the faithful. The production manager of a factory employing more than 5000 workers tersely expressed the difference between gross and net employees in his plant as follows: Of the men, 20% were doing their best, giving a full day's work for a full day's pay and 80% were indifferent; of the women, 80% were doing their best and 20% were indifferent. Other production managers when interviewed were in accord with this statement. Such a situation discredits both labor and management. Strikes in war production plants cannot be tolerated, yet their number has increased during the last year. Most of today's strikes are occurring spontaneously, without any apparent leadership and frequently over trivial grievances. Most of them have been immediately denounced by responsible union leaders. It seems clear that the time to prevent such strikes is when employees are not producing as they should, when the rank and file are under tension, are tired, irritable and jittery and are clumsy and slipshod in their work.

—From "Use of Industrial Incentives in War Production of Medical Materiel," by CAPTAIN ERNEST RISLEY EATON (MC) USNR, in *Illinois Med. J.*, January, 1945.

### Psychosomatic Medicine

PSYCHOSOMATIC medicine has much to offer, but its advocates would do well to keep in mind the following cautions: First, when psychological and physical symptoms occur together or in sequence, it does not necessarily follow that one causes the other; they may both be manifestations of the same cause, or they may be due to separate causes. Second, psychosomatic medicine offers no easy road to clinical success; much study and long practice are required to attain competence. And, finally, there is no substitute for common sense and thorough clinical work.

—From an editorial by BURTRUM C. SCHIELE, M.D., in *Minnesota Medicine*, February, 1945.

### Brain Scars

OF EVERY 100 men who survived head wounds in the last war, at least 34 developed convulsions like those of epilepsy. Some of the attacks came as late as twenty years after injury. In most cases, they appeared within the first weeks or months. In this war, according to Dr. William Gordon Lennox, of Harvard Medical School, one of the world's foremost authorities on epilepsy, the problem will be worse. (See "Employment of Epileptics," by LENNOX and COBB, INDUSTRIAL MEDICINE, 11:12, 571-575, December, 1942.) Many soldiers who would have died 25 years ago from head wounds will be saved by sulfa drugs. But as more survive, more will suffer membrane adhesions and scars that remain after the original brain injury has healed and may act as triggers for convulsions. Postwar neurosurgery to break up these adhesions and remove old, rough scars has controlled the convulsions of many veterans. But the important thing in treatment is to prevent as far as possible the formation of scars in the first place. Dr. Ernest Sachs, St. Louis neurosurgeon, described a new method of handling head wounds which may eliminate the serious after effect. With an electric knife, the surgeon severs all injured brain tissue, leaving a neat wound. Then a sheet of fibrin film, the blood-plasma derivative developed by Dr. Edwin J. Cohn of Harvard Medical School, is fitted over the surface. Smooth, strong, and as elastic as nylon, the fibrin takes the place of the injured dura (membrane that covers the brain). Experiments show that eventually the body builds up another membrane to take the place of the blood fibrin film. The result has been an unscarred brain and a chance to avoid head-injury epilepsy.

—*Medical World*, November, 1944


# PEDICULOSIS

must be relieved *Quickly* among

# WAR WORKERS

Early discovery, and immediate and effective control, are important in the treatment of Pediculosis among war production workers. Unless proper steps are taken, a single case of Pediculosis may lead to infestation of other employees.

Cuprex is a valuable aid to the industrial physician who bears the responsibility of having to discover and check any condition which may impair the efficiency of the workers under his care.

Cuprex therapy is simple. One treatment—of from 15 to 30 minutes—destroys the nits as well as the lice. Cuprex requires no messy or repeated applications, and the patient may return to his job without delay, and without embarrassment.

*Literature on request*

MERCK & CO., Inc. *Manufacturing Chemists* RAHWAY, N.J.

CUPREX

*The Personal Insecticide*

Available in 2 oz. and 4 oz. bottles

# pH6 ENDS ABSENTEEISM CAUSED BY "Factory Hands"

SINCE WE PUT IN pH6 DERMATITIS DOESN'T ROB OUR TIME CLOCK ANY MORE.
NO SIR! NOT ONE CASE THAT CAUSED LOST TIME IN THE 90-DAY TEST PERIOD.
pH6
SKIN CLEANSER FOR "Factory Hands"

Accepted for advertising in publications of the American Medical Association

Among the scores of plants operated by one of the "industrial giants," Plant X was cursed with the greatest loss of time due to dermatitis. Many remedies were tried unsuccessfully. As a last resort, the Medical and Safety Engineering Departments arranged to test pH6 on a plant-wide basis. To their extreme pleasure, they did not have one single case of lost time due to dermatitis during the entire 90-day test period.

As a non-alkaline "soap replacement," pH6 is the ideal remedy for "Factory Hands" . . . the raw, red, defatted skin condition that causes workers so much discomfort, embarrassment and even loss of manual dexterity. No other cleansers need be used in conjunction with pH6. It gently yet speedily removes nearly all types of industrial grime . . . even those that stubbornly resist harsh alkaline soaps. Yet when used on a plant-wide basis, pH6 does not increase costs . . . *and often saves money*. Send for free samples and complete technical data. Mail the coupon.

THE STEPAN CHEMICAL CO
1353 North Branch St., Chicago 22, Ill.
Gentlemen: Please send samples and circular on pH6. No cost or obligation.

NAME_____ TITLE_____
FIRM_____
ADDRESS_____
CITY_____ STATE_____ IM3


Public Library
Detroit, Michigan

QUICK REPAIR *in Traumatic Surgery*

● Healing is speeded by perfect coaptation—plane to plane closure of tissues.

The wide range of Ethicon Sutures permits the selection of the proper suture material for each tissue type and traumatic condition.

Order Ethicon Sutures from your Surgical Supply House.

ETHICON *Sutures*

*Complement the Surgeon's Skill*

**Ethicon Suture Laboratories, Division of Johnson & Johnson, New Brunswick, N. J.**

### Caveat Emptor

LEFT-OVER dressings from the last war were no doubt kept in storage until supplies purchased when the country entered the present conflict began to crowd them out; and purchases of these dressings, which may have some value even if very little, especially for hospitals, were perfectly legal. No experienced hospital buyer, however, would dream of buying such goods unless it became impossible to secure fresh supplies, which has not yet been the case. Similarly, reports have been heard of adhesive plaster two years old being offered from surplus stocks. Such plaster, unless kept under approximately perfect conditions as to temperature and moisture, would in all probability be very nearly worthless. If it came from storage under emergency conditions, in buildings (or temporary field shelters) exposed to very hot temperatures and other unfavorable conditions, its value to hospitals or to anybody else would be extremely low. The speculator who has purchased such an item, however, has the right to attempt to sell it; wherefore it behooves the hospital executive who may be tempted by a low price to remember the ancient adage, *caveat emptor*—"let the buyer beware." Dressings are not the only items made for the last war which are floating around seeking a final resting place. Among others, instruments of Japanese manufacture are said to have made their appearance not too long ago; and while it is possible that careful inspection and testing might pass such instruments as suitable for use in the operating room, the odds are very strongly against it. Since there are adequate supplies of needed instruments, as of other goods available to hospitals from sources on which they can rely, the tantalizing hope of a whopping saving in price should not tempt any informed executive into buying (from government surpluses) items which might be of the kind referred to.

—*Surgical Business*, February, 1945.

### The Tyranny of Temperature

DESPITE his elaborate internal temperature-control mechanism, optimum temperature and humidity ranges exist for man, varying somewhat with activity and the type of clothing worn. For light work indoors, it appears that temperatures of from 65 to 70°F and relative humidities of about 60% at the lower temperature and 40% at the higher give the greatest feeling of comfort and the best conditions for efficiency. When sleeping, somewhat lower temperatures are preferable provided some form of covering is used to maintain a temperature of about 80°F next to the skin. The temperature-regulating mechanisms of the body are sufficiently flexible, however, so that in completely dry air indoors human beings can tolerate temperatures up to 112° when nude and up to 138° when clothed. Clothing protects the body not only against cold, but also against heat, as desert dwellers have long known. As the humidity at high temperatures rises and perspiration evaporates more slowly, clothing becomes decreasingly valuable. In saturated air at 88°F, the clothed body is unable to prevent its internal temperature from rising above normal, and a genuine fever results. For a nude body, the corresponding limit is about 92°F. At low temperatures the limit of toleration is vaguer, since it is greatly affected by clothing and physical activity; but when the air inside the clothing becomes too cool, just as when it becomes too warm, the body is so fully employed in the task of keeping its internal temperature constant that there is little surplus of energy for any other activity. Much effort has gone into the gathering of objective data by which the general level of civilization in various areas may be judged, and while it is easy to overestimate the effect of a given variable, it does seem that a good climate is an important aid, although not a guarantee, for a low average death rate, low infant mortality and high per capita income. For example, tests of general culture have shown Washington, Oregon, California, New York, Connecticut and Massachusetts high on the list. Indeed, it has been suggested that development of heating means facilitated the spread of civilization to northern Europe in the Middle Ages.

—*Industrial Bulletin* of Arthur D. Little, Inc., February, 1945.

REG. U. S. Wyeth PAT. OFF.

# Vitules

REG. U. S. PAT. OFF.

## IMPROVED FORMULA VITAMIN CAPSULES

A FORMULA BASED ON

*The Modern "Yardstick" of Nutrition*

RECOMMENDED DIETARY ALLOWANCES
NATIONAL RESEARCH COUNCIL

**The dietary recommendations of the Food and Nutrition Board of the National Research Council[1] have been widely adopted as standards for good nutrition.**

**They have become a sort of "yardstick" of nutrition.**

**These standards are considerably higher than those believed to represent the "minimum daily requirements".**

**The vitamin content of Vitules is based on the recommended dietary allowances for the moderately-active adult male.**

**There is little doubt that the average healthy patient can and should obtain these quantities of vitamins from a good diet of natural foods.**

**However, an *independent* source of these important food factors is desirable in certain cases.**

**Vitules are recommended as an independent source of optimum quantities of the essential vitamins:**

- ***to supplement dietary management* in patients on restricted diets,**
- ***to supplement dietary management* in those who show objective evidence of multivitamin deficiencies,**
- ***to supplement dietary management* in the prevention of secondary vitamin deficiencies in chronic wasting diseases and in preoperative and postoperative cases.**

**Here is how the Vitules formula compares with the recommended dietary allowances[1] for vitamins:**

| | | |
|---|---|---|
| VITAMIN A: | Recommended: | 5000 U.S.P. Units |
| | Vitules: | 5000 U.S.P. Units |
| VITAMIN D: | Recommended: | † |
| | Vitules: | 1000 U.S.P. Units |
| ASCORBIC ACID: | Recommended: | 75 mg. |
| | Vitules: | 75 mg. |
| THIAMIN: | Recommended: | 1.8 mg. |
| | Vitules: | 2.0 mg. |
| RIBOFLAVIN: | Recommended: | 2.7 mg. |
| | Vitules: | 3.0 mg. |
| NIACIN: | Recommended: | 18 mg. |
| | Vitules: | 20 mg. |
| PYRIDOXINE: (vitamin $B_6$) | Recommended: | †† |
| | Vitules: | 2 mg. |
| CALCIUM PANTOTHENATE: | Recommended: | †† |
| | Vitules: | 20 mg. |

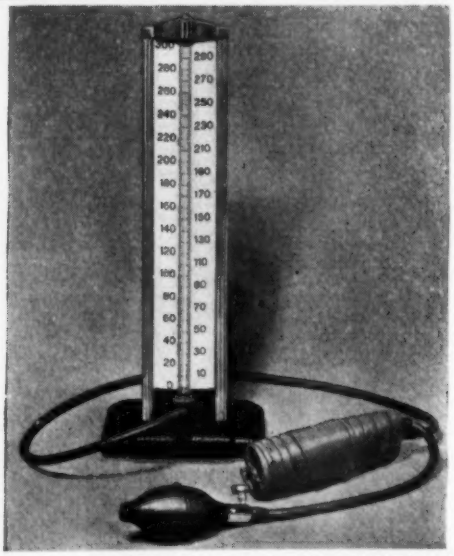
†"Vitamin D is undoubtedly necessary for older children and adults. When not available from sunshine, it should be provided probably up to the minimum amounts recommended for infants." (400 I.U.)

††"In addition to the three factors of the B complex included, other members of the group, such as vitamin $B_6$ and pantothenic acid, should be given consideration."[1]

1. Recommended Dietary Allowances, National Research Council Reprint No. 115, January, 1943.

WYETH INCORPORATED • PHILADELPHIA 3, PENNA.

## A #5006 on your desk... looks better ...lasts longer... costs less



B-D #5006 MANOMETER

Constant opening and closing, wrapping and unwrapping, transferring from bag to desk to bag again — prematurely wears out Blood pressure machines.

A B-D #5006 Manometer will eliminate much of this handling. Your present portable manometer will have its life extended if reserved exclusively for bag use. Also, you avoid any possibility of discovering upon arrival at a patient's home that your dual use manometer remains on your office desk.

The B-D 5006 Manometer has no case to open and close — largely eliminating breakage and consequent danger of mercury leakage. It has no hinges or locks to require repair. The non-tip weighted base requires little desk space, permitting the instrument to be easily moved to any part of the office. The high visibility scale, registering to 300 millimeters, lends to the attractive and professional appearance of the 5006. This individually calibrated and certified mercury instrument assures constant accuracy.

The 5006 is inexpensive. Priced at $20.00 to the physician. Ask your regularsurgical dealer to show you the B-D 5006.

B-D PRODUCTS *Made for the Profession*

BECTON, DICKINSON & CO., RUTHERFORD, N. J.


### Cold Vaccines

OF THE COLD vaccines now available, none "when administered by the routes advised has proved value," the A.M.A. councils on pharmacy and chemistry and on industrial health state in a report in a recent issue of *J.A.M.A.* The report is based on studies of cold vaccines made by various groups of physicians. Vaccines to be given by mouth, by hypodermic injection and by spray into the nose were included in these studies. The results of use of these vaccines were either negative or, according to the A.M.A. councils, were used on too few persons or for too short a time to be conclusive. Any attempt at present to prevent colds by use of vaccines is "purely experimental," the medical association report states. Their uncontrolled use should be discouraged. If industrial physicians use them, they are advised to do so under rigidly controlled conditions and to report their results "so that useless preparations can be promptly eliminated and further development and progress made."

—*Science Digest*, February, 1945.

### Medical Care

THIS title is that of a selected, annotated bibliography published by the Industrial Relations Section, Department of Economics and Social Institutions, Princeton University. 30 cents from the publishers. We quote from the foreword: "There is much reason to believe that in the period of transition from war to peace the American people will direct increased attention to the problem of assuring adequate medical care to every citizen. Public discussion of sulpha compounds, penicillin, plasma, and other newly developed aids have stimulated the interest of millions of persons in modern medical techniques. They want these techniques to be available to their families and themselves when sickness strikes. Further, a very articulate segment of our population will have spent months and years in an employment in which first-rate medical service was provided without raising the immediate question of one's ability to pay doctors' bills. Still further, plans for the prepayment of hospital service have provided a satisfying sense of security for a comparable group of civilian wage earners and their families. With the want recognized and the funds available, the American public will, without doubt, be actively concerned in arrangements for obtaining adequate medical care by prepayment of averaged costs. Two groups close to the rank and file of industrial workers are already recognizing this mounting interest in the provision of medical care. Many progressive employers appear to be taking a renewed interest in arrangements for financing medical care for their employees. More striking is the rapid growth of attention on the part of American trade unions to plans for assuring medical service through union sponsored programs to their constituents, whether or under the terms of a collective agreement with the employer. As in the case of protection against unemployment and dependent old age, the parties affected are moving to fill a need unsatisfied by either individual or governmental action."

—Connecticut General's *Notes & Quotes*, February, 1945.

### Need Glasses

CLASSIFICATION of industrial plant workers according to visual skill will bring about increased production efficiency, according to DR. J. H. COLEMAN of the manpower department of Sperry Gyroscope Corporation, New York. Studies made among 800 inspectors of precision instruments disclosed that there were more than twice as many inspectors with "poor" vision as there were with normal eyesight. Another fact brought out was that more than half of the inspectors whose vision was below standards required for their jobs had no glasses. A systematic program of eye examinations in factories to rehabilitate all persons with subnormal vision and to maintain working efficiency will have a marked effect upon production, DR. COLEMAN maintained.

—Connecticut General's *Notes & Quotes*, February, 1945, from *New York Times*, October 22, 1944.

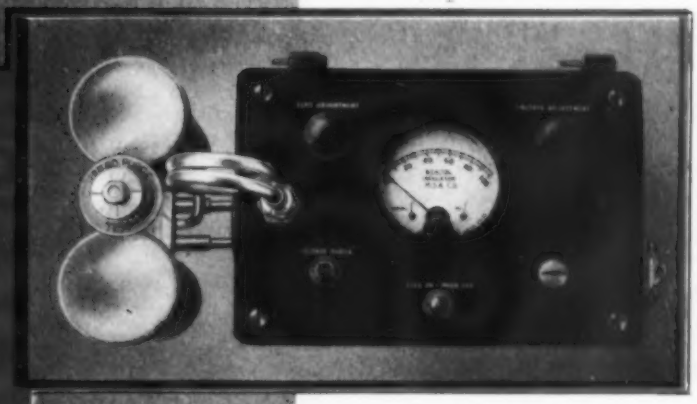
### The Blight

FROM 1925 to 1934 (every third year) delegates representing the U. S. attended the International Congress of Radiology in Europe. Incidental to attending the above meetings, many of us visited the

for your plant Benzol hazards—

***Extreme Sensitivity***

**IN DETECTION AND ACCURATE INDICATION**



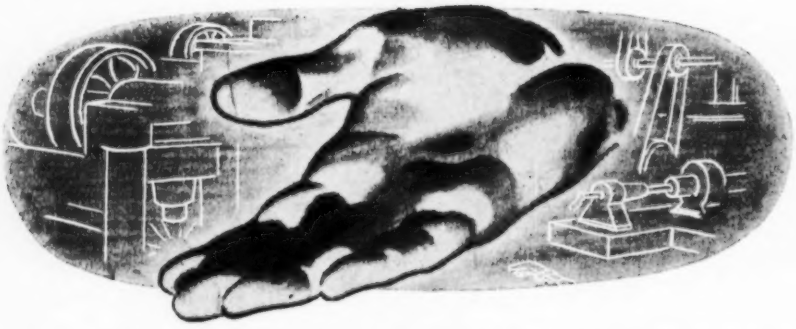
Top view of the instrument, with hinged cover removed. Fifty graduations on meter scale enable concentrations to be read directly to within 20 p.p.m.

# The M·S·A *Benzol* INDICATOR

- **LIGHTWEIGHT**
- **PORTABLE**
- **EASY TO USE!**

Specially designed for investigations of Benzol concentrations which might be dangerous to the health of workers, this modified combustible gas indicator accurately determines Benzol hazards where these exist at the working places, with a wide field of use in chemical, by-product coke, paint, varnish, and rubber plants—and, in fact, everywhere that Benzol is encountered as a menace to health and safety. The M.S.A. Benzol Indicator is readily portable, and has a range of from 0 to 1000 parts of Benzol per million parts of air. The instrument is equipped with a dessicator tube for removal of water vapor from sampled air, and a Benzol scrubber which provides a means of balancing the electrical circuit in presence of Benzol vapors (each with replaceable cartridge); the Indicator enables determination easily and quickly on the job. For the descriptive facts, send for our detailed Bulletin DM-3.

**MINE SAFETY APPLIANCES COMPANY**
**BRADDOCK, THOMAS AND MEADE STREETS**
**PITTSBURGH 8, PENNA.**



LOCAL SULFONAMIDE THERAPY

Flint, Eaton sulfonamide preparations are available for every topical use—

compound fractures • wounds • lacerations
abscesses • carbuncles • burns
boils • surgical and obstetrical procedures

A FORM FOR EVERY USE

Sulfanilamide U.S.P. Sulfathiazole U.S.P.
In ½-oz. insufflator tubes. (Nozzle attachment can be obtained at slight additional cost.)

**Sterile Sulfanilamide (Flint) in Double Envelope:**
For use in the peritoneal cavity or wherever complete sterility is necessary. Contains 5 grams (77 grains) sterile sulfanilamide in fine granular form.

**Hydrophilic Base Ointment:**
Sulfanilamide 5% and 10%.
Sulfathiazole 5% and 10%.
Sulfatoin Emulsion Base Ointment
(Sulfanilamide 10% and Allantoin 2%)

*Write for full information on Flint, Eaton Sulfonamide Products.*

FLINT, EATON & COMPANY
DECATUR • ILLINOIS

more popular clinical centers in Germany and Austria. The unmistakable gradual decline of scientific medical, surgical, and radiological clinical progress, and the gradual limitation of new scientific research developments, were beginning to take shape in 1928. In 1934 the effect of regimentation of medicine in Europe reached a new low and final collapse when compared to similar scientific advances in the clinics of this country. Previous to 1925 the reverse had been true. When physicians visited Europe in the quest of additional scientific knowledge, they took advantage of the superior type of medical skill and research progress observed, and were well repaid for their long sojourn. The regimentation of the medical profession, called the Kranke Kasse, a new form of political legislation which Hitler forced upon the German people, eventually affected the medical care of all classes in the free or pay clinics of Europe. The change to the panel system in England and to the Kranke Kasse methods of medical practices in Germany did not appear so radical, but later, after repeated visits to these same clinics, the dire effects of this new epoch in medical service became more noticeable. The doctors with whom we were personally acquainted seemingly lost interest and fervor in the science and art of medicine. Others were forced to abandon their former institutional cancer therapy and radiation research programs in which they previously had been actively engaged.

—Dr. Edwin C. Ernst, in *Weekly Bulletin*, St. Louis Medical Society, February 9, 1945.

### Proposed Industrial Health Act

In response to several requests from state divisions of industrial hygiene for a statement of desirable provisions for state industrial hygiene laws, a "Proposed Industrial Health Service Act" has been prepared and sent to all the states. This proposed Act sets forth the duties of a state agency in regard to the investigation of places of employment and the adoption of rules and regulations pertaining to the control of industrial health hazards. It specifies actions that should be considered violations, namely, denial of access of health department representatives to industry, and the use of harmful materials known to be dangerous to the health of the workers. Requirement of reporting of occupational diseases to the state division of industrial hygiene by physicians is also included in the proposed Act.

—*Industrial Hygiene Digest*, 9:1, 5, January, 1945.

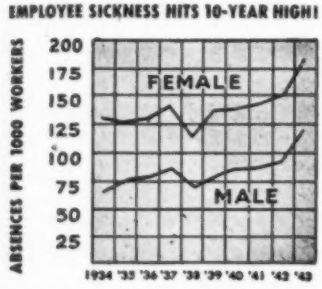
### Sit Lux

Government offices in Washington were revealed, in many instances, to have lighting inadequate for the work done in them, by an investigation recently made by the Engineering Unit of the Industrial Hygiene Division. It was found that accountants and statisticians were working under light of three to four foot candles, where the minimum amount proper for this type of work is 50 foot candles. Large numbers of clerks, typists, and others were found struggling under a similar handicap. Where direct-type incandescent lights were installed as a remedial measure, these were found sometimes to provide an adequate level of illumination, but with undesirable quality because of glare, brightness contrasts, and point sources of light within the field of vision. Improper arrangement of desks with respect to light sources was another common error. "Unfortunately, government agencies have lagged far behind industry in their appreciation of proper lighting and its relation to employee efficiency, morale, and eye health," declared the report. "Government office employees are working longer hours and more intensively during the present emergency. To those doing work requiring close application, the added eye burden of inadequate illumination

**No. 4 of a series on how vitamins work in industry**

## THE MISSING LINK

The absentee worker presents, to management, a grave and growing problem. Dramatic evidence of this lies in the chart below, revealing the sharp increase, over a ten-year span, of the frequency of disabling sickness among workers. The sicknesses here recorded are for 8 consecutive days or longer.




Data from reports of sick benefit associations, group insurance plans and company relief departments as compiled by Industrial Hygiene Division, U. S. Public Health Service.

Other figures, bearing on the same vital subject, stem from an N.A.M. survey of a representative sample of its membership, indicating a rise from the prewar absentee rate of 3.48% to a wartime average of 5.42%.

It is hardly necessary to elaborate upon what such figures mean to industry. One estimate alone states that an excess of 3 to 4% in absences in a highly tooled industry can mean an 8 or 10% reduction in production, each per cent in absence reducing production about 2½%.

## MORE THAN MEETS THE EYE

"MINUS" MEALS

Frequently lost sight of among many of the more obvious reasons for absences—colds, fatigue, digestive upsets and such—is the spectre of bad diet.

That excessive fatigue, lowered resistance to colds, eye-strain, impaired efficiency and lowered morale *can* be attributed to faulty diet, may be assumed from the National Research Council's statement in its bulletin No. 110: "It is generally accepted that natural resistance to disease is dependent upon the body's nutritional state."

## DIETARY DELINQUENCY

The same authority, the National Research Council, also states that "all evidence from numerous surveys is, without exception, that inadequate diets are widespread in the nation."

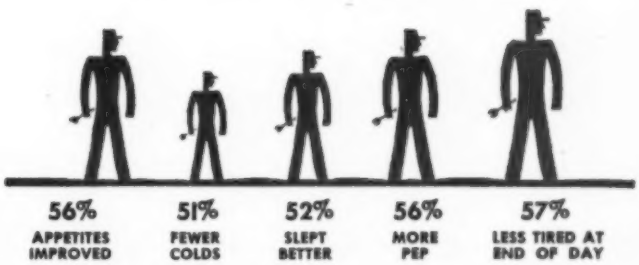
Is there not good reason, then, to believe that such a situation exists within your own company, your own employees?

## SUPPLEMENT WITH VIMMS

To help protect workers against the debilitating results of defective diets, many industries—textile, chemical and numerous others—utilize the Vimms Industrial Plan in both plant and office. Inexpensive and easily organized, the Vimms program supplies all the vitamins known to be essential in the diet, *plus* all the minerals commonly lacking. Vimms make up the difference between what the average worker gets in his regular diet and what he should receive. (NRC Recommended Allowances for vitamins and minerals.)

Plants using the Vimms Plan report up to 90% of the workers enthusiastically participating in this vitamin-mineral supplementation program. For example, in a large manufacturing firm, employees taking Vimms regularly, returned questionnaires revealing:

### TYPICAL EMPLOYEE REACTIONS




Equally gratifying are results reported by other companies. Unreported, however, is the fact that the Vimms Plan also serves to guard against those prolonged nutritional deficiencies which might affect even the workers' later years.

## TAILORED TO YOUR OPERATIONS

The Vimms Industrial Plan is carefully worked out between you and our trained industrial consultants and is custom-tailored to your own individual system of operations. Distribution trays, speakers for employees' meetings, posters and payroll stuffers are provided free with the plan.

**WRITE TODAY FOR FULL DETAILS**

**Department of Industrial Research**
**Lever Brothers Company, Box 243-DI**
**50 Memorial Drive, Cambridge 39, Mass.**

**Gentlemen: Please tell me more about how the Vimms Plan works.**

**Name**_____

**Company**_____

**Address**_____

# UNGUENTINE*

## a BURN OINTMENT with PLUS factors

*Petrolatum*, for surface protection—
*Oleostearine*, for intensified action.

**PLUS**

*Parahydrecin**, an active antiseptic and germicide.

**PLUS**

A marked analgesic, decongestant effect.

**PLUS**

A proven non-toxic, non-irritant character favoring cell proliferation and tissue repair.

*Trial Package Free to Physicians*

THE NORWICH PHARMACAL COMPANY, NORWICH, N. Y.

A Norwich* PRODUCT

*T. M. Reg. U. S. Pat. Off.


is a serious one. Remedial measures may be justified on the basis of increased employee accuracy and efficiency alone," the report continued. "Until such remedial measures have been completed, continued employee complaints can be expected, with consequent high labor turnover and reduced employee efficiency." Properly engineered fluorescent lighting systems generally have been recommended.

—*Industrial Hygiene News Letter*, January, 1945.

### Rhode Island

DR. CHARLES L. FARRELL, chairman of the community health commtitee of Pawtucket Business-Chamber, presided at a meeting of mittee of Pawtucket Businessmen January 29. He suggested a health bureau as a subsidiary of the Chamber, to cooperate with programs for industrial and community health. He outlined an extension course to begin at Brown University February 20. It will be a 12-weeks' course on health, designed to show how the medical profession can aid business and industry. Subjects will include absenteeism, basic principles of industrial hygiene, and what medicine offers industry. He said 3,000 plants in Rhode Island do not have full-time medical service; that there are a large number of doctors well equipped and interested in industrial health programs; that the medical profession is eager to help in any way to develop a plan. . . . CITING several instances where plants have found a health service to be a sound investment, HOWARD STRONG, secretary of the health advisory council of the U. S. Chamber of Commerce, stated that General Electric Company has had a health service for 30 years and now has a health staff of 1,000. Almost all large industries have found it pays to support a medical staff. He told of one plant which on September 1 launched a plan of morning and afternoon recreation periods for lunch. At the end of September production had jumped 10%.

—*Pawtucket Times*, January 30, 1945.

### Increasing Interest

OUR relations with the medical profession have been an interesting progression through a first stage of antagonism, to a second stage of recognition as a war-time necessity approved for the "duration," and now a third stage of active support and interest by some of the leaders in medicine and some of the medical universities who see in our plan a possible solution to medical care. A solution which could be created by the physicians themselves without the necessity of lay interference or government intervention. The numerous requests received by our organization for addresses to professional groups and hospitals are evidence of this increasing interest.

—SIDNEY R. GARFIELD, M.D., in Second Annual Report, Permanente Foundation Hospital, January, 1945.

### Medicine and the Changing Order

NEW YORK Academy of Medicine has a "Committee on Medicine and the Changing Order," established early in 1943. Its objectives are "to be informed on the nature, quality, and direction of the economic and social changes that are clearly forecast for the immediate future; to define in particular how these changes are likely to affect medicine in its various aspects; to determine how the best elements in the science of medicine and in its services to the public may be preserved and embodied in whatever social order may develop, so that ultimately the best possible medical care may be made available to the largest number of persons at the most economical costs." The Committee, composed of physicians, representatives of the allied professions of dentistry and nursing, and laymen, undertook to achieve its objectives by a series of conferences and studies carried on concurrently, and, since March 5, 1943, it has held weekly conferences, at each of which there was an address by an invited speaker on some subject in which he was expert, and which was pertinent to the Committee's work. Fifty-four such weekly conferences were held between March 5, 1943, and June 16, 1944. Among the speakers, DR. J. J. WITTMER, Consolidated Edison Company, New York, talked on "Embracive Industrial Medicine," and COLONEL A. J. LANZA, Director, Occupational Health Division, Office of the Surgeon General, on "Perspectives of Industrial Medicine." The monograph studies which the Committee now has well on the way to completion include "Medicine in

# the BIG BOSS himself came to see *ME* today!

. . . and that's the first time HE ever came into MY office. He came in to congratulate me personally on the swell job my Safety Department is doing to prevent accidents and industrial diseases. I didn't think he realized what a tough job this is, but he did. That visit made up for all the sweat and hours I've put in to hang up the top safety and health records in this territory. No wonder my "Welcome" mat is out for all safety suppliers!

For more than a decade, Safety Men have specified PLY Creams and Liquids for the prevention of skin diseases in industry. You'll understand why, when you write—without obligation—for the Eleventh Edition of THE ANSWER TO INDUSTRIAL DERMATITIS . . . the authoritative handbook in this field.

**THE MILBURN COMPANY**

**3246 E. WOODBRIDGE • Detroit 7, Michigan**

*Manufacturers of PLY products and PLY-GARB safety clothing*

PIONEERS OF SKIN PROTECTION IN INDUSTRY

# *The story of* ERTRON

**Views of the right hand of a female, aged 66 years; illustrating the characteristic toil-worn hands of *osteo-arthritis;* duration of disease, 3 years; occupation, housewife.**

This hand demonstrates clearly Heberden's nodes or bony overgrowths on the left lateral aspects of the distal interphalangeal joints. Nodes are clearly noticeable on the third and fourth fingers. The apparent swelling but actual overgrowth of the proximal interphalangeal joint of the fourth finger suggests a spindle-shape characteristic of an atrophic arthritis. The fingers are distorted due to changes noted. Thus, the terminal phalanx of the index finger is slightly displaced to the left and the phalanges of the third and fourth fingers are displaced to the right.

The story of Ertron* is based on extensive and continuous clinical research in arthritis therapy over a period of ten years—as reported in a comprehensive bibliography.

*The safety and effectiveness* of Ertron has been proven in leading hospitals, universities, clinics and private practice. Work carried on under rigid conditions of control in all sections of the country has shown the value of Ertron in arthritis management.

*The clinical work* has been done on Ertron and the clinical results demonstrated in the bibliography apply only to this product. Ertron alone—and no other product—contains electrically activated, vaporized ergosterol (Whittier Process).

**TO ERTRONIZE:** Employ Ertron in adequate dosage over a sufficiently long period to produce beneficial results. Gradually increase the dosage to that recommended or to the toleration level. Maintain this dosage until maximum improvement occurs.

***ETHICALLY PROMOTED***

Bottles of 50, 100, and 500 capsules

Ertron Parenteral for Supplementary Intramuscular Injection

**NUTRITION RESEARCH LABORATORIES**
**CHICAGO**

*Reg. U. S. Pat. Off.

**X-ray reveals narrowing of the articular spaces between the terminal phalanges along with irregularity and bony overgrowth or lipping with the resultant formation of Heberden's nodes. In contrast to the atrophic arthritis note the absence of decalcification or destruction of bone.**

**Protective CLEANSING for SKILLED HANDS**

TO FAVOR RECOVERY in the dermatoses, replace all harsh or irritating skin detergents with ACIDOLATE Skin Cleanser.

1. It is a water miscible nonlathering mixture of sulfated oils.
2. It contains no soap, alkali or abrasives.
3. It quickly emulsifies cutaneous soil and facilitates its thorough removal by rinsing with water.
4. It emulsifies residual ointments and simplifies their removal from the hair or skin.
5. It leaves the skin feeling soft and cool.
6. Reports from ten clinics attest to its value.

*Specify ACIDOLATE wherever soap is contra-indicated or inadequate. Supplied in 8 ounce and gallon bottles. . . . Literature and sample on request.*

**ACIDOLATE**

TRADEMARK REG. U. S. PAT. OFF.

*SCIENTIFIC SUBSTITUTE FOR SOAP*

*Distributed for* **NATIONAL OIL PRODUCTS COMPANY** *by:*

**RARE CHEMICALS, INC.** HARRISON, NEW JERSEY + **GALEN COMPANY, INC.** BERKELEY, CALIFORNIA

56J

Industry," by BERNHARD J. STERN, PH.D., Department of Sociology, Columbia University. The Committee's Interim Report, to the Fellows of the Academy, contains the following, on "The Provisions of Medical Service by Corporate Bodies: With the development of the modern science of medicine there took place a very wide extension of the physician's functions. At the same time a variety of corporate bodies began to provide medical services. Formerly the physician simply treated the sick. Today he does that, and in addition may care for the well. He may furthermore be an industrial physician, a school doctor; work for the Department of Health, or for an insurance company. Many physicians have thus become the employees of corporate bodies. These changes have created many complications in the practical task of caring for the sick. They have also frequently placed the physician in the anomalous position where, as an employee, he competes with himself as a private practitioner, and more commonly with the rest of his confreres. The economic phase of these complications is serious; but even more important are the defects and inefficiencies produced in the care of the sick. It is pertinent to recognize that most of the provision of medical services by corporate bodies was in most instances occasioned by pressing necessities. For that very reason they were not planned beyond the immediacy of the specified need. The result has been a vast and complicated confusion in prerogatives and responsibilities. Many of the confused and paradoxical relationships between the private practitioner and the corporate bodies providing some form or other of medical care and treatment are of such a grievous nature that they urgently demand correction. The out-patient departments of hospitals in which physicians serve without compensation; the free clinics, health centers, diagnostic and treatment clinics of the health departments; the industrial health services; the school health services—all those require careful scrutiny to the end that they may be more effectively related to the work of the individual practitioner of medicine, upon whom, in the last analysis, devolves the major responsibility for the care of the sick."

### Psychic Stuff

CONGRESS has been considering the plight of the government worker with a hangover. If he goes to one of the Federal job counselors he may find out his hangover is a government-certified neurosis with a $5 name. But these job counselors ought to cut out that stuff, Representative Wigglesworth (Rep., Massachusetts) told the House. In fact, he thinks it might be a better idea to cut out the job counselors. He backed up his argument with a report from a congressional committee which investigated the business of job counseling. Here are some of the things the committee found: "The employee who took a few days out for no good reason except plain cussedness may find that he has a psychosis." If he calls on his counselor the chances are the counselor will decide he has a "persecution complex." "Hangovers are authoritatively diagnosed as some form of neurosis." The job counselors are hired to provide "competent psychiatric assistance to employees requiring this type of aid." . . . UNDER the heading, "Psychic Stuff," *Chicago Daily News*, February 11, comments editorially: "On the prowl in the wonderland of Civil Service, Congressman Wigglesworth, of Massachusetts, flushed a new variety of the fast-growing fauna of psychiatry. It's the 'job counselor,' who, in the language of the Civil Service Bureau, is hired by the government to provide 'competent psychiatric assistance to employees requiring this type of aid.' They help, too. Whenever a fellow needs a $50 word to avoid the implications of a measly little nickel or dime one, the job counselor is Johnny-on-the-Spot. For instance, a hangover becomes a neurosis, and 'plain cussedness,' says Wigglesworth, becomes a psychosis. But you have to have a 'psychoneurosis' to get past a draft board. Some day somebody is going to ask: 'Why put funny folks on the government payroll, in the first place?'"

This "big gun of electronics" is a symbol of Machlett's ability as a tube manufacturer.

In this unique tube is found the highest development of the basic requirements common to all electron tubes for whatever purposes. These are:

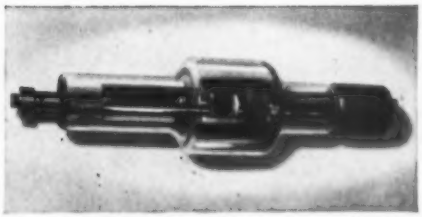
The tube must be structurally sturdy, compact, and completely vacuum-tight.

It must embody means for the accurate, effective and stable control of an electron stream.

It must have adequate heat-dissipating properties.

The difficulties of meeting these requirements are multiplied many times by each increase in size, design-complexity, and voltage. They reach an all-time high in this 2,000,000-volt d-c X-ray tube.

When buying electron tubes, whether X-ray, oscillators, amplifiers or rectifiers, look for the Machlett name as evidence of high technical achievement protecting your purchase. For information about available types of Machlett tubes write Machlett Laboratories, Inc., Springdale, Conn.



*Machlett DT-220 deep therapy X-ray tube for treatment of deep-seated malignancies.*

MACHLETT

**X-RAY TUBES SINCE 1898**

**TODAY THEIR LARGEST MAKER**

## CURRENT ARTICLES of QUALITY

### The Disabled Veteran

INDUSTRIAL Hygiene Foundation (4400 Fifth Avenue, Pittsburgh 13) Special Series Bulletin No. 3, "Putting the Disabled Veteran Back to Work," Part I, Proceedings Ninth Annual Meeting, published January, 1945. Extracts: "Foreword," by JOHN F. MCMAHON, Managing Director—"More than a year ago, Industrial Hygiene Foundation, at its 1943 Annual Meeting, pioneered with a panel discussion on 'Putting the Disabled Veteran Back to Work.' At the close of the panel, C. D. SELBY, M.D., Chairman, stated: 'We want to keep this panel going until the rehabilitation job is done.' The panel has 'kept going.' First, the discussion was published separately from the Proceedings of the 1943 meeting and the number of copies distributed have exceeded any previous Foundation publication. During the year, members of the panel have answered inquiries from industry on procedures for successful job placement of veterans, have examined proposed company plans for re-employment of ex-servicemen, and have otherwise provided information and assistance to member companies and industry generally. The panel resumed its discussions in connection with the Foundation's Ninth Annual Meeting which was held at Mellon Institute, Pittsburgh, on November 15 and 16, 1944. The formal presentations and general discussions are published as Part II of the panel and as a part of the formal Proceedings of the Foundation's 1944 Annual Meeting". . . . "Vocational Rehabilitation and Placement of Veterans," by HARLEY L. KRIEGER, M.D., Medical Director, Ford Motor Company—"Up to October 1, 1943, at the Rouge Plant, we had placed 348 veterans on suitable work. As of October 1, 1944, we have placed a total of 1,580 veterans back to work; of these, 556 are new men. That is, they are veterans who have never worked for us. Eight hundred seventy veterans have been reinstated. These are the men whose military leaves for induction were issued by the Ford Motor Company. One hundred fifty-four veterans were rehired. That is, at some previous time they worked for us, but were not inducted into the service from Ford Motor Company. All of the men were placed at work by the Medical Transfer Department. Four employees have been added to this staff during the past year, bringing its total to 15. 'Exit interviews' also have been added to this department's work. These interviews are not confined to veterans. Following through from exit interviews, management has placed one man on veteran hiring. This will enable the veteran to have a personal interview. He will be able to express his desires more confidentially and perhaps we in turn can place him more intelligently on a job. Information gained from exit interviews on 57 veterans who quit during the last year or so, shows very little of a standard nature. Thirty-eight were old employees and 19 new employees. Reasons for terminating services were many and varied—running from a new wife in California to an outright impostor apprehended by the F.B.I. The degree of disability, mental or physical, had little to do with their desire to move on. Some asked for outside jobs and, when such jobs were given them, still were not satisfied. In the main, I believe, these men returned to industry a little too soon and perhaps in the near future they will 'find' themselves and make the grade. As it was, the transition from Army to industry had been too fast for them. They needed a 'conditioning' station in between. Of the 1,580 veterans working, much can be said in their favor. It is true that we had to transfer some of them two or three times; sooner or later, though, a suitable job was found, a job which appealed to them. Then their troubles were over". . . . . "New Experiences in Putting the Disabled Veteran Back to Work," by A. A. HENDRIX, Director of Personnel, Eastern Aircraft Division, General Motors—"Since our meeting here a year ago we at Eastern Aircraft have

Advantages
OF
SELF-STERILIZING
NEO-SULFAREA
IN THE TREATMENT OF
SUPERFICIAL AND DEEP WOUNDS
INFECTED TRAUMATIC WOUNDS AND BURNS—LEG ULCERS—BED SORES
NEO-SULFAREA—2% Sulfanilamide, 2% Sulfathiazole, 10% Urea in a new water soluble, vanishing cream base—offers decided clinical advantages:—
(a) The new self-sterilizing feature of Neo-Sulfarea makes it suited to the treatment of deep seated infected wounds.
(b) The sulfonamides have demonstrated their effectiveness against common pyogenic organisms.
(c) The presence of urea helps stimulate formation of granulation tissue and promotes healing.
In ¾ oz. tubes and 1 lb. jars at better pharmacies.
THE DRUG PRODUCTS CO. INC.
19 West 44th Street • New York 18, N. Y.

*Now Available*

**FOR YOUR PRIVATE OFFICE**

**AMERICAN SMALL INSTRUMENT STERILIZERS**

Years of trouble-free service in numerous hospitals from coast to coast make American the logical sterilizers of choice for your office needs.

**HERE ARE VALID REASONS WHY...**

- The chamber is its own thermostat... nothing to fail through fatigue.
- Of the thousands in use, not a single "burn-out" has ever been reported.
- Automatic temperature control includes on-and-off operation *plus* permanent safety low-water cut-off.

*ORDER TODAY or write for further information*

**AMERICAN STERILIZER COMPANY**

**Erie, Pennsylvania**

**DESIGNERS AND MANUFACTURERS OF SURGICAL STERILIZERS, TABLES AND LIGHTS**

"Total" Therapy
FOR INDUSTRIAL DERMATITIS

"The therapy of a majority of the cases of contact dermatitis encountered in industry", according to the noted dermatologist, Dr. Frank C. Combes[1], "requires no further medication than the intelligent use of a *good buffer solution such as Liquor Aluminum Acetate (Burow's solution)* . . . and a *good crude coal-tar paste.*"

His preference for wet dressings solution is **Domeboro Tabs** ("widely used in industry", particularly by Parkes[2] at Curtiss Wright for cutting-oil dermatitis)—because it is "a convenient tablet which, when dissolved in water, releases a *lead-free aluminum acetate in appropriate dilution,*" with a substantial percentage of boric acid.

The *crude coal-tar paste* used at New York University, according to Combes, "is manufactured commercially under the name **Daxalan**"—which has been found *superior to distillates, filtrates and pastes containing liquor picis carbonis.*

It must be properly applied for "optimum benefit", and Combes advises thinning with **Domolene** for spreading over a large area —because in his judgment its hydrophilic ointment base "does not materially lessen the therapeutic efficacy of the paste."

With tissue repair under way, and only erythema remaining, the use of **Domeboro Ointment** (each ounce of which, in a special hydrophilic base, possesses the therapeutic action of one Domeboro Tab diluted in a pint of water), permits a quicker return to work, while healing is promoted by its efficient topical action.

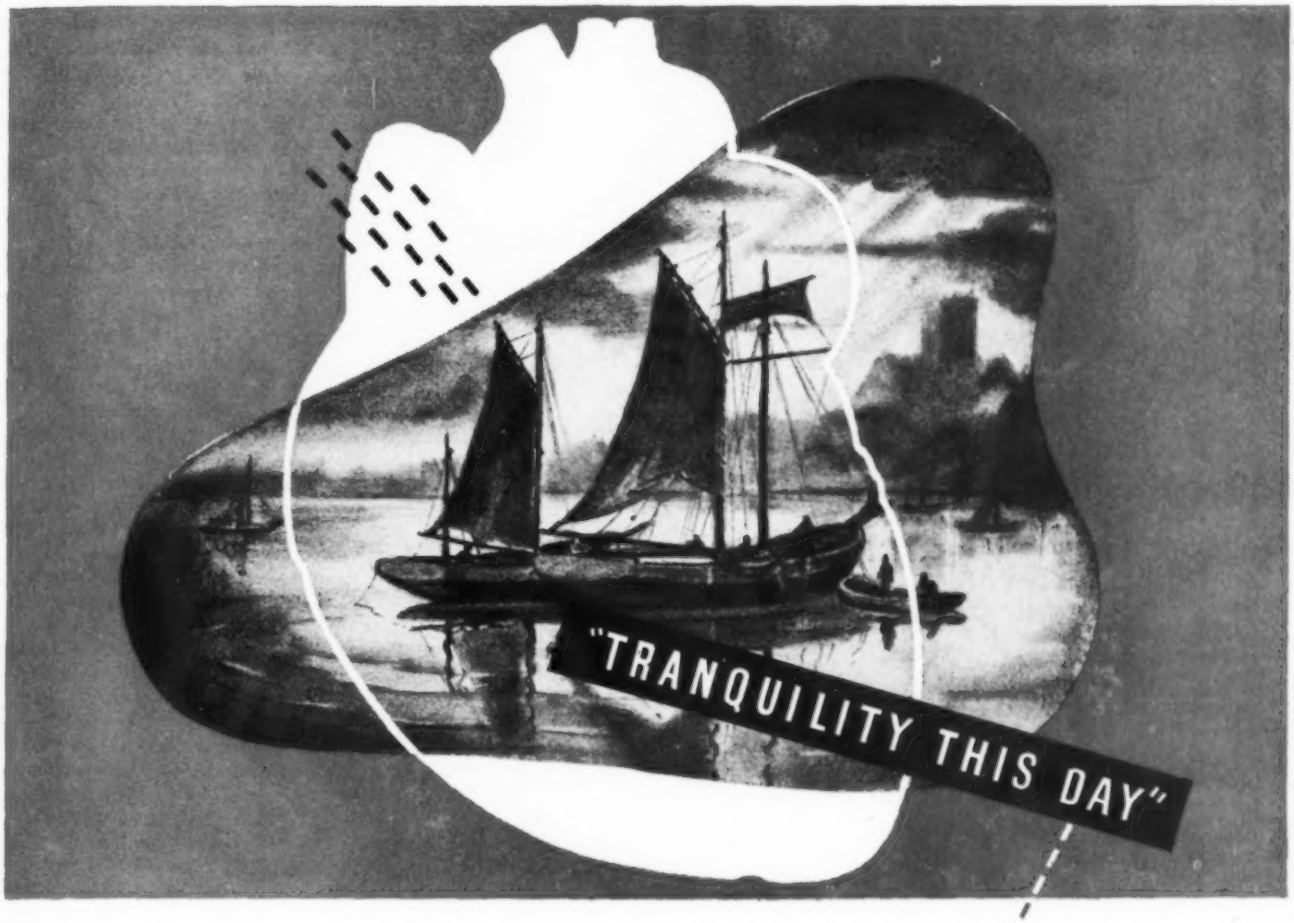
(1) Combes, F. C.: Indus. Med., July, 1944.
(2) Parkes, Morey: Indus. Med., January, 1944.

*Samples and full details gladly sent on request*

DOME CHEMICALS, INC.
250 EAST 43rd STREET • NEW YORK 17, N. Y.

Canadian Distributor: F. J. Whitlow & Co., Ltd., 165 Dufferin Street, Toronto, Ont., Canada

had the benefit of a good deal of valuable experience in the re-employment of ex-servicemen and ex-servicewomen. We have had a chance to test the principles we described last year and to develop some new ideas as well. At our plant we have gone through an employment cycle. Up until last November we were hiring rapidly and reached a peak of 15,627 employees. From November on our enrollment gradually declined — there were no layoffs for several months, but we did not replace all of our turnover. During this period we reinstated our own employees returning from military leaves but the number of ex-servicemen newly hired decreased steadily until the summer, when we started a layoff. We are continuing, of course, to reinstate all of our own ex-servicemen and ex-servicewomen. They are now returning at the rate of about three a week. The following is an excerpt from a talk given at the Princeton Industrial Conference on September 19, 1944: We have employed approximately 1,100 ex-servicemen since 1942. Of these about 300 were former employees. Four hundred seventy-four have been released. The following is a breakdown of this released group: (1) Quits to take other jobs, go back into business, to regain health, etc., 396; number of these men who were former employees, 68. (2) Returning to military service, 36; number of these men who were former employees, 23. (3) Discharged for cause, 42; number of these men who were former employees, 3. Reasons given in exit interviews were quite varied and included, in addition to the above: (1) transportation difficulties; (2) planning to get further education; (3) wants to work outdoors; (4) sickness in the family, etc. These are, obviously, not unlike the reasons given by civilian employees as well. Our turnover with ex-servicemen has been somewhat greater than with civilian employees, as might be expected. This can be considered as simply one of the characteristic symptoms of the readjustment period, for the men and women tend to be restless and unsettled as to their objectives. As indicated above, we are in the process of a major cutback in our working force. Owing to the fact that we had hired many veterans who had never worked for us before, naturally we had to lay these people off in line with seniority as provided in the union contract. Through working with the local War Manpower Commission and U. S. Employment Service people we were in a position to have War Manpower Commission representatives at our Employment Office with a referral slip to another job for every veteran we had to lay off. Any veteran who objected to the layoff (and we had a few who did) or who had received a permanent injury in our plant or who had any other difficulties in connection with his employment, was interviewed by our Veteran Coordinator before being laid off. In nearly all cases a satisfactory outcome was achieved. However, the fact that we were laying off veterans caused some disturbance in the community—sympathizing people who did not understand the G. I. Bill of Rights. Most of this disturbance came from the local American Legion Posts. However, in practically every case we were able to allay the disturbance. During the past year of experience we have improved our veteran setup in several respects. Not long after the program got under way one of our personnel staff was asked to take on the duties of Veteran Coordinator. He is a veteran of World War I and a man of unquestioned standing and ability. All matters of policy clear through him and, as his title indicates, he coordinates the activities of the several departments having to do with the veterans. He is responsible to the Veterans' Guidance and Policy Committee, which meets at intervals to establish policies, review problem cases, etc. This committee includes the following: The works manager; the medical director; the plant psychiatrist; the employment manager; the training director; the safety director; the general superintendent; the director of quality; the director of labor relations; the veteran coordinator. The writer serves as chairman. Our procedure for reinstating the men returning from military leave (and this applies almost the same to veterans who are new hires) is as follows: The veteran first sees the Coordinator, who welcomes him back to the plant, then takes the time to get acquainted and to become familiar with the man's situation, disabilities, if any, etc. The ex-serviceman is then given a complete examination, including x-rays, etc., by the plant physician and in most cases is also seen by Dr. Eadie, the psychiatrist. On the basis of their recommendations the man is offered the job he left to enter the




In essential hypertension, increasing evidence establishes the action of a **Bio-Assayed VERATRUM VIRIDE** in bringing arterial pressures under control.

By vagus stimulation, vasodilation and reflex heart action, a widespread dilation of arterioles is accomplished with the second important effect of improved circulation. In Tabules VERATRITE, Bio-Assayed Veratrum Viride is combined with Sodium Nitrite and Phenobarbital---exhibits a wide range of therapeutic safety.

Biological standardization of Veratrum employs a Daphnia Magna method (an Irwin, Neisler process.)
Supplied in bottles of 100.

**Tabules**

# Veratrite

IRWIN, NEISLER & COMPANY • • • DECATUR, ILLINOIS

IN THE CONTROL OF

*Contact Dermatoses*

Wide use in a large number of industries has established TARBONIS as an effective means of controlling industrial dermatoses, virtually regardless of the offending irritant. TARBONIS is highly efficacious not merely therapeutically when lesions have occurred, but also prophylactically.

TARBONIS differs from other tar preparations in its active ingredient, an especially processed Liquor Carbonis Detergens which presents notably higher concentrations of phenol and cresol derivatives, sulfur compounds, and unsaturated hydrocarbons—the components to which the therapeutic efficacy of tar is attributed.

TARBONIS is anti-inflammatory, decongestant, and promotes resolution. It is free from tarry odor . . . greaseless . . . non-staining and non-soiling . . . leaves no trace upon the skin, does not interfere with the "workability" of the hands, even when applied to the palms.

• • •

Physicians are invited to send for a generous clinical test sample and comprehensive, illustrated brochure on prophylactic and therapeutic use.

**THE TARBONIS COMPANY**
**4300 Euclid Avenue • Cleveland 3, Ohio**

*Distributed in Canada by*
Fisher & Burpe, Ltd., Winnipeg, Man.

TARBONIS
REG. U. S. PAT. OFF.

***All the therapeutic value of tar in an odorless, greaseless, non-staining, non-soiling, vanishing-type cream.***

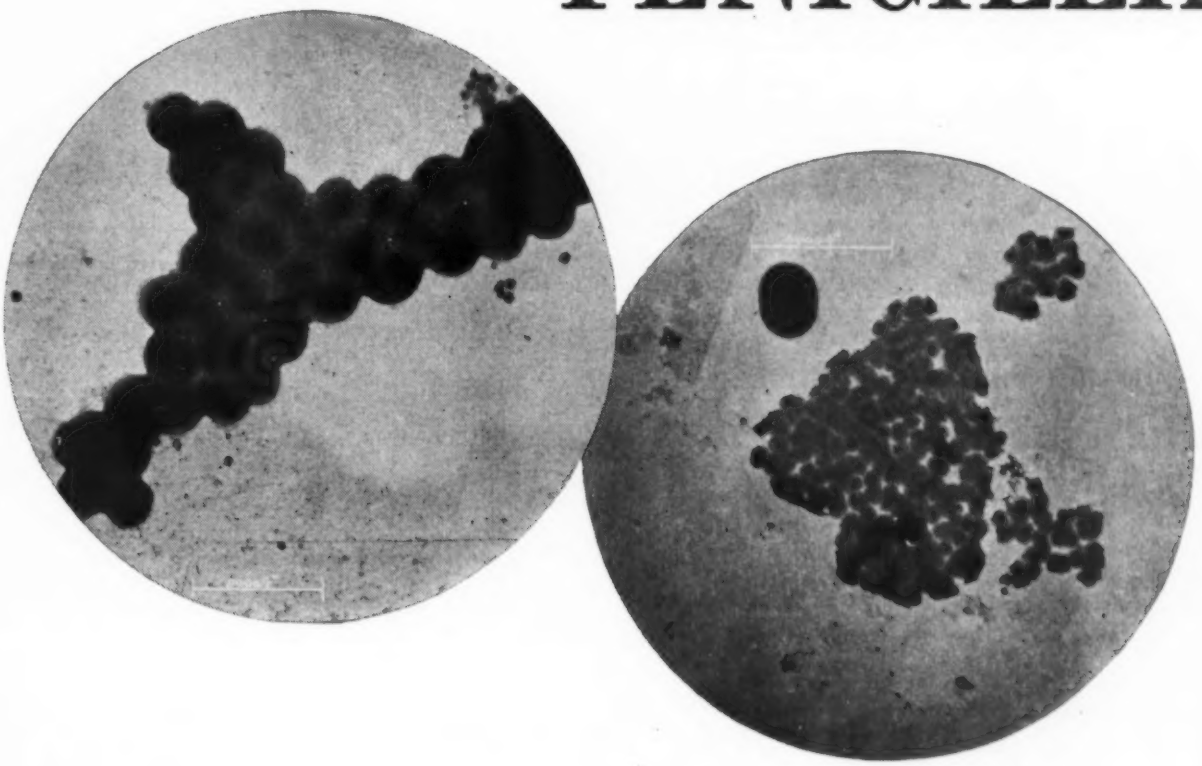
service or one of like seniority, status and pay. As might be expected, men with certain disabilities have to be placed on jobs different from those they previously held. So far, fortunately we have been able to find a job suitable to his condition for every veteran. Also, we have had to transfer some cases one or more times before they became property adjusted." . . . . "Guidance of the Disabled Veteran Returning to Work," by BENJAMIN F. STREETS, M.D., Medical Department, Westinghouse—"Definite figures concerning our employment experience might be of interest. From March 1, 1944 to November 1, 1944, we employed at our East Pittsburgh plant a total of 822 World War veterans. Of this number, 348 had been previously employed by Westinghouse and 478 had been employed elsewhere. The reasons for the discharge of these men from military service are varied. The most common cause of discharge was psychoneurosis. One hundred sixty-one cases were discharged for this reason or because of epilepsy or schizophrenia. The last two categories accounted for only five cases. War injuries or injuries suffered prior to service and aggravated by service accounted for 83 cases of discharge. Seventy-two discharges were due to gastric disorders, 70 were granted because of over-age, 30 because of low-back difficulties, 25 because of renal disorders, 24 because of dependency entailing unusual hardship, and 23 because of otological defects. These constitute the causes of greatest incidence. Among the miscellaneous causes of discharge might be mentioned arthritis, flat feet, visual defects, asthma, cardiac disorders, rheumatic fever and others of less frequency."

## Expansion of Existing Programs

FACTS for Victory," by Labor Research Association, in *Daily Worker, New York City*, February 3, 1944: "Despite increased production and war conditions, control of occupational health hazards has improved in the last two years. For example, in World War I in one TNT plant alone there were 105 deaths from occupational diseases. So far in the present war 14 have been recorded in 20 plants. The U. S. Public Health Service, the Department of Labor, local health and labor department units, trade union leaders, and some progressive-minded employers have cooperated in increased industrial hygiene activities to establish this better record. Experts recognize, however, that many problems of industrial health are still unsolved. In the chromate, logging and lumber industries, for example, conditions were so bad last year that men were unwilling to work under such hazards and a labor shortage resulted. In slaughtering and meat packing, health hazards were so great that the Department of Labor called a conference last May to plan a health program for this industry. In shipbuilding higher production has resulted in increased exposure to lead poisoning caused by zinc and lead fumes and spray painting. In a parachute plant in Kentucky, 137 cases of acute carbon tetrachloride poisoning occurred in 1943-44; many other chronic cases also resulted from this poisoning. An alarming increase in anthrax was recognized in the wool industry. Greater use of radium dial painting resulted in warnings from the Public Health Service on the special hazards involved. In the electrical industry, those workers who operate high vacuum electronic tubes at high voltages are exposed to dangerous concentrations of x-rays; protection by sheet steel or lead is necessary. A recent study of the mica industry in North Carolina revealed that dust concentrations were excessive. Examinations of 1,121 men showed tuberculosis incidence was much greater among those with mining and mineral grinding experience. This study, as well as one made of persons exposed to wood dust, indicate that lung diseases may be caused by other substances besides free silica, silicates, and asbestos. Although no cure for silicosis has yet been found, breathing of metallic aluminum dust seems to be effective in preventing its development. This preventive method is now used on a small scale in some industries. It is thought that machinists' silicosis has been practically stopped through the elimination of stone grinding wheels. Poisonous chemicals include chlorinated naphthalenes and diphenyls (halowax) which may cause disease and death. Manufacturers of these products have recently agreed to label all containers filled with these chemicals. During 1943 seven states enacted laws on occupational diseases.

# THE STRIKING ANTIBACTERIAL ACTION OF

# PENICILLIN



These photomicrographs, taken with the powerful new RCA electron microscope at a magnification of 38,000 diameters, dramatically reveal the striking bacteriolytic action of Penicillin.

The first photomicrographs of Penicillin's action to be taken with the RCA electron microscope, the one on the left shows organisms from an untreated culture of *Staphylococcus aureus,* while that on the right shows the virtually complete dissolution of these organisms after the addition of Penicillin.

The discovery, production, and clinical evaluation of this remarkable chemotherapeutic agent constitute a signal advance in medicine's relentless warfare against disease.

As a pioneer in Penicillin research, development, and large-scale manufacture, Merck & Co., Inc. will continue to expand production, with the objective of supplying adequate quantities for civilian medical needs, as well as for our Armed Forces.

PENICILLIN
MERCK

*A Signal Advance in Chemotherapy*

MERCK & CO., Inc. *Manufacturing Chemists* RAHWAY, N. J.

# CUT ABSENTEEISM

*. . . by giving women workers the facts about menstruation*

**Too many women lose 1 to 3 working days each month simply because they have no real understanding of the process of menstruation.**

**Doctors and nurses, searching for an easy and effective way to solve this problem, find the answer in "That Day Is Here Again", a booklet prepared expressly for the purpose by the makers of Kotex sanitary napkins.**

**This easy-to-read booklet treats the difficult subject of menstruation in a frank and friendly fashion that cannot be resented.**

**You can secure enough FREE copies to supply every woman worker under your charge. We provide them as a contribution to the war effort—to help save priceless working hours. Just fill out and mail the coupon—NOW!**

*T. M. Reg. U. S. Pat. Off.

**FREE BOOKLETS**

*for every woman worker*

**This 24-page booklet is written for your workers. Lists do's and don'ts for women. Tells how to feel better and stay on the job regardless of the calendar. Discusses sleeping, drinking, diet, showers, how to lift, how to curb cramps, when to see a doctor. Free—with the compliments of Kotex.***

**THE INSTRUCTION MANUAL, "Every Minute Counts," is a "refresher" course that helps you conduct classes for women workers. It's FREE together with Visual Charts on Menstrual Physiology.**

**MAIL TODAY!**

International Cellucotton Products Co., Dept. 23, Box 3434, Chicago 54, Illinois
Without charge or obligation, send me:

.....copies of "That Day Is Here Again."

☐ a copy of the Instruction Manual "Every Minute Counts."

☐ a set of Visual Charts on Menstrual Physiology.

*Name*.....

*Address*.....Public Library.....

*City*.....Detroit, Michigan..... *State*.....

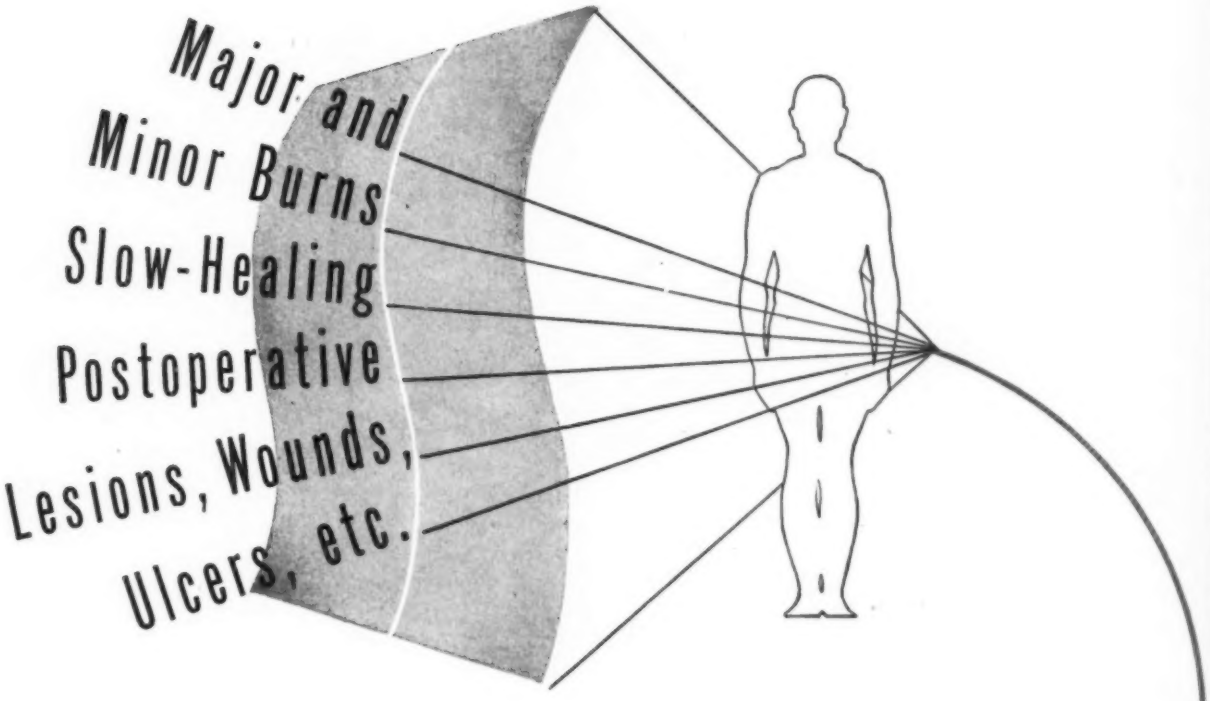

Of these Oregon and Michigan extended their laws which aim for complete coverage. Illinois greatly improved its laws, and they are now nominally in advance of those of other states. Nebraska extended its coverage to include all industries. Virginia in 1944 provided for a detailed schedule of occupational diseases—the 28th state to have such laws for protection of workers. New Jersey added silicosis and asbestosis to its list of compensable diseases. Kentucky changed its law to recognize asbestosis and silicosis in all industries. New York and Louisiana increased the benefits allowed for disabled workers. Industrial health experts recognize that reconversion will bring many changes in operations, new processes and the handling of new materials—all of which mean new potential health hazards. By the end of 1944 about half of the funds used by state industrial hygiene agencies were Federal grants-in-aid. Many among the state personnel were lent from the Public Health Service only for the duration of the war. Such an industrial state as Ohio, for example, had only one doctor and one industrial hygiene engineer. Expansion of these state industrial health programs is considered essential."

### Health Examinations

CLIFFORD KUH, M.D., DR.P.H., "Periodic Health Examinations versus Early Sickness Consultation," *Permanente Foundation Medical Bulletin*, 3:1, 12-21 (January, 1945). "COMMENT: The case for the periodic health examination is weak; the case for the early sickness consultation leaves little room for argument. Yet while the evidence is against the periodic health examination and favors early sickness consultation, there is much to learn about early sickness consultation. For example, can we do more to promote the early sickness consultation than to provide readily accessible facilities? Can convincing statistics be produced to show that pre-payment plans encourage earlier seeking of medical advice, as we may presume they do? There still remains to be answered whether public health education can profitably be directed to stimulate the members of medical care and hospitalization plans to utilize available facilities to utmost advantage through the earliest possible seeking of medical advice. CONCLUSIONS: There is no conclusive evidence that the periodic health examination is a practical means for improving the health or longevity of the masses. The examination is practical only for selected groups and individuals, particularly for those persons who want it and will profit by it. Physical examination records are subject to great variation and are of limited value for estimating the health at any given time of a cross-section of our population. Whatever the nature of health so revealed, there is no evidence that periodic health examination would be a factor in improving it. Only through controlled study of mortality experience can the value of the periodic health examination be accurately estimated, but the opportunity has not yet been presented for conducting such a study on a sufficiently large scale. Early sickness consultation is of demonstrated value. Furthermore, educational effort to promote the early seeking of medical advice for illness capitalizes on the motivation of the symptom—motivation which is lacking in the case of apparently well people who submit to periodic health examination. This lack may explain the unpopularity of the periodic health examination and the difficulty of promoting it. The question is raised whether there should not now be a shift of emphasis from advocating periodic health examination to advocating early sickness consultation. Early sickness consultation is apparently encouraged by readily available medical facilities and by prepaid medical care and hospitalization plans, now being expanded, because such plans remove cost barriers at the time of illness. There still remains to be evaluated the full potentialities of early sickness consultation."

### Rehabilitation

DR. J. F. JOHNSON, Medical Director, Eastern Aircraft—Trenton Division, General Motors, with the co-




THE therapeutic effectiveness of topically applied vitamins A and D to promote granulation and to stimulate rapid, healthy epithelization is supported by ever-increasing clinical evidence.

In major and minor burns, in slow-healing postoperative lesions, in chronic, indolent ulceration, in crushing and avulsive soft-tissue injuries—in surface wounds in which the extent or nature of the tissue defect makes surgical closure impossible or inadvisable—excellent results have been accomplished with the topical application of White's Vitamin A and D Ointment.

## white's vitamin A and D ointment

provides the natural vitamins A and D derived from fish liver oils in the same ratio as found in cod liver oil, in a soothing, lanolin-petrolatum base. The Ointment possesses a pleasant odor; is free from excessive oiliness; will not stain tissues or become rancid.

In four convenient sizes: 1.5 oz. tubes, 8 oz. and 16 oz. jars, 5 lb. containers. Ethically promoted. White Laboratories, Inc., Pharmaceutical Manufacturers, Newark 7, N. J.

MARGIN for SAFETY
NURSES SAY
SAFETY ZONE
C.M.L.O. L.I.A.
RECENT
controlled clinical tests* confirm the wide safety margin of Pineoleum Spray or Drops for local symptomatic relief in upper respiratory tract affections.
Pineoleum encourages a satisfactory degree of nasal ventilation . . . without the excessive vasoconstriction of some ephedrine preparations. At the same time, it forms a soothing protective film over the irritated passages — thus relieving the distress of dry encrustations . . . rather than increasing them, as aqueous solutions may.
Used early, Pineoleum often helps to abort an attack — or shorten the period of disability by easing distress and furthering the recuperative process.
Indeed, for more than 40 years, Pineoleum has successfully stood the "test of time". That's why it is today such a favored prescription with the profession.
FORMULA: Pineoleum contains camphor (.50%), menthol (.50%), eucalyptus oil (.56%), pine needle oil (1.00%), and cassia oil (.07%), in base of doubly-refined liquid petrolatum — plain or with ephedrine (.50%).
*Griesman B. L.: Arch. Otolaryng., 39:124, 1944; Novak, F. J., Jr.: Arch. Otolaryng., 38:241, 1943.
PINEOLEUM
Reg. U. S. Pat. Off.
PLAIN OR WITH EPHEDRINE
Protects WHILE IT RELIEVES
THE PINEOLEUM CO. • NEW YORK 4, N. Y.

operation of H. V. HOFFMAN, Employment Interviewer, Eastern Aircraft, "Role of Industrial Medicine in the Rehabilitation of Veterans," *Journal of the American Medical Association*, 126:17, 1073-1077 (December 23, 1944). Extract: "I should like to request that the Veterans' Administration issue a directive, instructing all factories which employ veterans as to what to do with the various types of cases. In my opinion it is not sufficient to get the information for the veteran. It has been our experience that the veteran does not know where to turn or how to do what he is supposed to do in seeking aid. SUMMARY: Manufacturing industry in the past has employed only 15 to 24% of all people gainfully employed, and most of these employees, some 80% of them, worked in factories with less than a total of 500 employees. The average number of employees per factory in the United States is approximately 42%. I would suggest that the Veterans' Administration set up a local medical or personnel consultant who will act as an adviser to those few veterans who were a community problem before they got into service, were a personality problem in service, and now as veterans need a guiding hand. Roughly 85% of veterans working in industry will adjust themselves to their job with no more training or waste motion than industry is now experiencing with its present civilian personnel. I rather feel that training facilities will be available for those veterans, as well as for civilians, and I have no doubt that, as the more seriously injured veterans come back, industry will absorb its share, possibly more, in a way that will establish the veteran as a wage earner, in a manner that will instil confidence and respect for himself. We have had so few really physically disabled individuals that at this writing we cannot evaluate the adequacy of our present training school or methods. I cannot give any experience with totally blind, armless or legless veterans. I believe we must keep in mind that industry is not primarily an occupational therapy institution and that, in order to survive, the training of the more completely disabled veteran must be on a basis that is fair to industry and inspiring to the individual. CONCLUSIONS: (1) Manufacturing industry, especially the small plants, needs a true record of the physical and mental status of returning veterans for proper job placement. (2) In the absence of an intrinsic medical department, some local Veterans' Administration office must function to evaluate physically and mentally the proper placement of the veteran. This agency is urgently needed now. (3) Eighty-five per cent of veterans now returning are satisfactory employees. (4) They differ very little from the civilian worker in industry today. (5) Some veterans need advice in reconstructing their own life. The need for such reconstruction frequently existed before their induction into service. (6) In one manufacturing plant, strictly on a seniority basis, 15% of the short term employees who have gone in service will not have a right to a job until some 7,000 other individuals have been placed. Apparently there is a need for appraising the relative value of "seniority" and "being a veteran." (7) Manufacturing industry will probably employ one out of every seven veterans returning, according to our past experience. (8) There is an apparent immediate need for informing the various industrial plants as to what to do with a veteran who has either an emergency illness or needs medical or welfare help. A circular giving the names of the local agencies and phone number of the persons in charge of these local agencies is suggested. Such a circular could be issued by the Veterans' Administration service. Such an agency should be in operation now."

## Epic Chapter

FROM "American Nurses in Five Wars," in *Clinical Excerpts*, 18:9 and 10, 167-173. Extract: "Both army and navy nurses were among those who felt the first impact of the war at Pearl Harbor and in the Philippines. Juanita Redmond, an army nurse who was on duty as Sternberg General Hospital in Manila when the Japanese attack came and who served through the long ordeal of our forces on Bataan, has published a vivid account of her experiences. The initial surprise and confusion at Manila were succeeded by the hasty improvising of hospitals in hotels, schools, sports "palaces," and all other available buildings. On December 23, a number of doctors and nurses were ordered to Bataan. Early the next morning, a caravan of buses, ambulances and jeeps left Sternberg Hospital carrying nurses, doctors, pa-

Otis Clapp & Son

PRODUCTS

◆

OBTUNDIA CREAM

OBTUNDIA

OBTUNDIA is a modern, antiseptic, liquid surgical dressing with pronounced surface anesthetic and penetrating properties. It is highly bacteriostatic and germicidal and has been in general medical service for many years. It is now increasingly used in industry as a reliable first-aid and plant-hospital antiseptic for surface injuries. It is intended for external use only and is supplied in desirable quantities from ¼-ounce to 1-quart.

OBTUNDIA CREAM is a bland, calendulated, creamy ointment containing 10% Obtundia. It is readily applicable and especially efficacious in blistered and excoriated conditions, as it is analgesic, soothing to painful or itching surfaces, and inhibitory to infection. In industrial use it is excellent for burns and for chapped and roughened skin. Tubed in ¼-ounce and 1½-ounce sizes.

*Detailed information about Obtundia and its preparations with sample will be sent promptly upon request.*

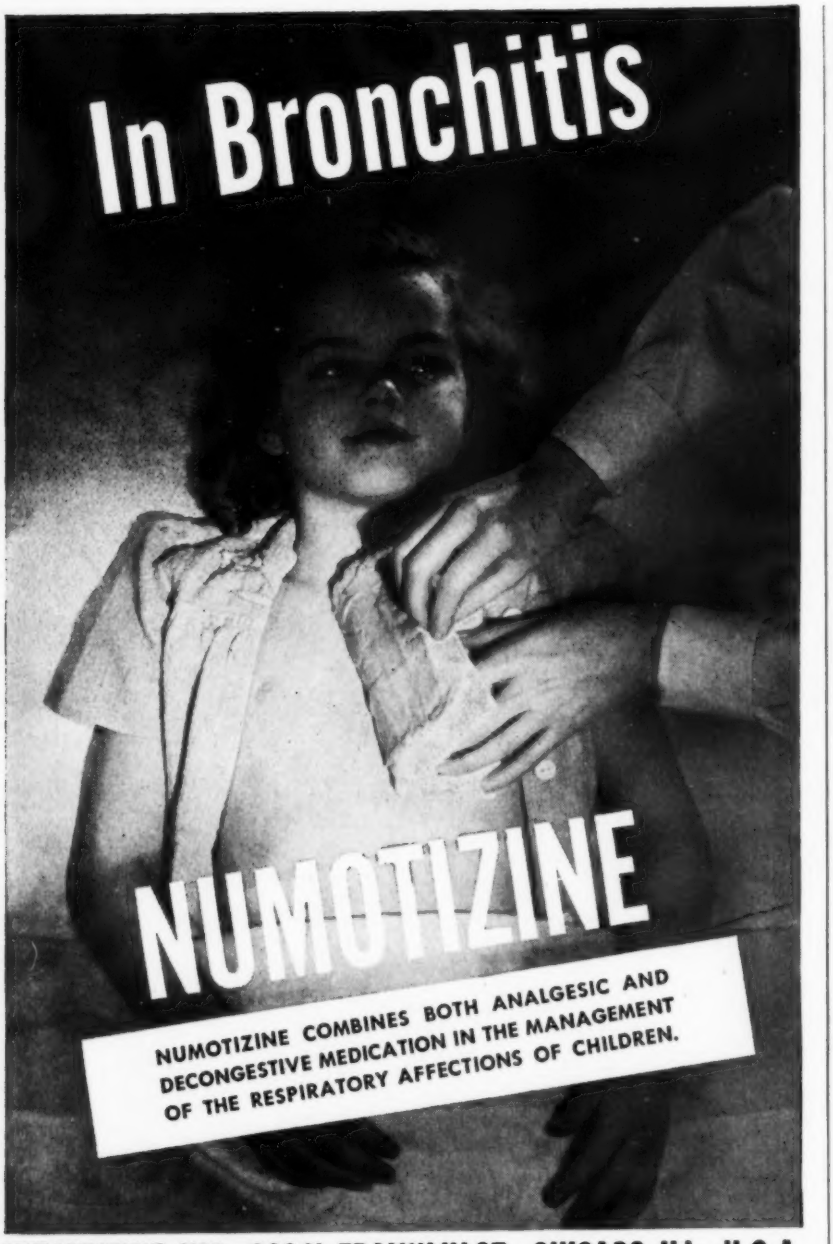
Otis Clapp & Son Inc.
BOSTON 16, MASSACHUSETTS

number of employees per factory in the United States is approximately

few really physically disabled individuals that at this writing we can-

Hospital carrying nurses, doctors, pa-




In Bronchitis
NUMOTIZINE
NUMOTIZINE COMBINES BOTH ANALGESIC AND DECONGESTIVE MEDICATION IN THE MANAGEMENT OF THE RESPIRATORY AFFECTIONS OF CHILDREN.
NUMOTIZINE, INC., 900 N. FRANKLIN ST., CHICAGO, ILL., U.S.A.

tients and equipment. They went to Limay, on Bataan Peninsula, where a hospital which became known as Base Hospital No. 1 was set up. A little later it became necessary to move to a new location, further back in the jungle and high in the mountains. Limay had already been evacuated when the empty hospital was bombed, incendiaries started fires, and the buildings were completely destroyed. The wards at the new station were merely two long tin-roofed sheds, with open sides and no floors. Accommodations were at first provided for 500 patients, but before the end nearly 2000 were being cared for. When the sick and wounded began to pour into the hospital, Filipino workmen were hastily brought in to build bamboo beds. Both these and the regulation iron beds had to be double and even triple decked. Some beds had to be placed out of doors. Finally it was necessary to spread mattresses on the ground; when even the mattresses gave out, springs covered only with blankets served for beds. Dust blew through the wards in clouds. Equipment was wholly inadequate and soon drugs, including such essential ones as quinine and the sulfa drugs, began to run out. Malaria in a malignant form was prevalent and, as food grew increasingly scarce and poor, beriberi and scurvy appeared. Water was always a problem on Bataan; the soldiers were often forced to drink from filthy pools. There was much bacillary and amebic dysentery. Many of the nurses became ill and all of them were exhausted from overwork and lack of food. Base Hospital No. 1 was bombed on March 30 but no great harm was done and it was thought that the bombing might have been a mistake. On April 7, bombers came over again. A direct hit was scored on one of the large wards; more than 100 patients were killed or seriously wounded. The wreckage was indescribable; only 65 beds were left standing. Most of the patients were transferred to Base Hospital No. 2, a few miles away. The next day it became known that Bataan was falling and orders came for the immediate removal of all nurses to Corregidor. In this immense fortress the hospital was in a well protected tunnel, under several hundred feet of rock, and the medical supplies were fairly adequate; but in less than a month it was seen that surrender was inevitable. Toward the end a number of nurses, together with some army and navy officers and a few civilians, escaped from Corregidor by airplane or submarine and reached Australia. One of their number, Chief Nurse Anna Bernatitus, of the Navy Nurse Corps, was the first person in the naval service to receive the award of the Legion of Merit, which had recently been established by Congress for outstanding devotion to duty. Col. Julia O. Flikke, Superintendent of the Army Nurse Corps, has written that when one of the nurses who escaped from Bataan was asked to account for the magnificent performance of the nurses on the doomed peninsula, she answered, 'We worked together.'"

### Percussion

DANIEL J. GLOMSET, M.D., Des Moines, "Romances of Cardiology," in *J. Iowa State Med. Society*, February, 1945 (35:2, 52-58). Extract: "PERCUSSION: In the middle of the eighteenth century there lived in the town of Graz, Austria, an innkeeper, whose son, Leopold, had a musical ear. One can imagine the little boy trotting into the cellar after his father as he drew beer or wine for his customers. The boy noticed that the father knocked on the barrel staves when he wanted to find out how much beer was left. Above the beer level the barrel was resonant; below the level it was dull. During the extremely full years at the medical school in Vienna, Leopold forgot the kegs in his father's cellar. Later when he worked as assistant to the clinic and still later as chief of the hospital of the Holy Trinity, he had opportunity again and again to observe gross lesions in the chest at necropsy which had been overlooked in the clinic. The hospitals in Vienna, then as now, were filled with chest-sick people. Fluid in the pleural sac is an exceedingly common finding at postmortem in such cases. Yet, the Viennese doctors were unable to recognize the fluid during life. It must have been while pondering this fact that Leopold Auenbrugger recalled his experience with the beer barrels. He tried knocking on patients' chests, and perhaps he tapped one in whom he suspected the presence of pleural fluid. He must have grown excited when he found the fluid at autopsy in the place where he had

—*Continued on page 260.*

# EVERY TYPE OF PRACTICE HAS THEM—

## Patients who Need Ultraviolet Radiation

***The Burdick QA-450 Lamp is a Durable, Stable, Economical Source of Ultraviolet Radiation***

### *Exposure to Ultraviolet Rays—*

**Stimulates Metabolism, Cellular Activity, Growth and Circulation.**

**Improves the Color, Tone and Elasticity of the Skin.**

**Produces Improvement in Muscle Tone.**

**Increases Leucocytosis.**

**Destroys Bacteria with which it Comes in Contact.**

***Write for further information.***

The BURDICK CORPORATION
MILTON, WISCONSIN

**Sulpho Hand Cleaner is made from sulfonated castor and vegetable oils. It does not contain any mineral oil. It is especially suited to workers who encounter chemicals which tend to remove normal fat of healthy skin, for naturally dry skin and for those who are required to dip their hands in solvents and degreasing compounds. West recommends that both Lan-O-Kleen and Sulpho be made available to give *all* your workers complete protection.**

# LAN-O-KLEEN*

Hundreds of thousands of men and women in factories all over America acclaim Lan-O-Kleen because it gets rid of dirt and grime so easily, effectively and actually leaves their hands feeling better. But of even greater importance is the fact that this remarkable powdered soap is doing so much to help prevent occupational skin diseases, because it does its job of cleansing the hands so *mildly* and without injury to the skin's surface.

All authorities agree on the importance of personal cleanliness, and some authorities go so far as to state that 90% of all occupational skin diseases could be prevented by proper personal cleansing methods.

Lan-O-Kleen is the first industrial hand soap to provide a full measure of the double action of effective cleansing and proper super-fatting with soothing, protecting lanolin. It is a powdered soap of mildly alkaline reaction compounded with granular corn-meal which has been impregnated, by an exclusive process, with anhydrous lanolin. In its use, the lanolin in Lan-O-Kleen buffers the mild alkaline reaction of the soap (necessary for proper cleaning), protecting the natural oil film of the skin and leaving the hands ready for top-speed production.

Reg. U. S. Pat. Off.

**WEST DISINFECTING Company**

**42-16 WEST STREET • LONG ISLAND CITY 1 • N. Y.**

*CLIP TO YOUR BUSINESS LETTERHEAD, PLEASE*

West Disinfecting Company, Dept. IM, 42-16 West St., L. I. C. 1, N. Y.

Please send me a SAMPLE QUANTITY of Lan-O-Kleen ☐ Sulpho ☐ with which I will give your claim a practical test. Please include folder explaining its use.

Name..... Title.....

Public Library
Detroit, Michigan

# Compatible companion for soap

A surface injury contaminated by dirt, or an unbroken skin in which an incision is to be made, requires a good scrubbing with soap and water before the application of a potent antiseptic. 'Merthiolate' (Sodium Ethyl Mercuri Thiosalicylate Lilly) retains its bactericidal properties in the presence of soap, has prompt, well-sustained germicidal effect, and is compatible with tissue and body fluids.

ELI LILLY AND COMPANY
Indianapolis 6, Indiana, U.S.A.

This magazine is published to promote sound thought upon and concerning industrial medicine and traumatic surgery. To that end it will contain articles, news items, reports, digests, and other presentations, together with editors' comments. The editorial policy is to encourage frank discussion. On this basis contributions are invited.

# Industrial Medicine

Reg. U. S. Pat. Off.

The editors will exercise care in checking on the accuracy of data printed, but in all other respects articles and opinions of which expression is allowed are the opinions of their authors—the editors reserving in all cases the right to comment on the same, in the current or any subsequent issues, as they may be inclined.

The Journal of Industrial Health, Occupational Diseases and Traumatic Surgery

With which are consolidated "The Industrial Doctor" and "International Journal of Medicine and Surgery."

The Science, the Law and the Economics of Industrial Health

Volume 14 March, 1945 Number 3

## Industrial Rehabilitation of the Handicapped

D. G. RIGERON, M.D.,
*Medical Director,*
*Walter Kidde & Company, Inc.*

THE problem of industrial rehabilitation of the physically handicapped is daily assuming greater importance, both because of the demands and as a result of the ravages of war. The spotlight of sympathy which is turned on victims who received their disabilities in the service of their country, and which is spurring a solution of their problem, might be considered one of the productive results of the war. For, although the handicapped are always with us to some degree as a consequence of accident and disease, the problem has been too easily shelved in peace-time.

The industrial placement, training and supervision of handicapped workers now in progress on a more or less experimental basis was begun in most instances because of the dearth of manpower. However, it constitutes the laboratory out of which can come the formula for handling the large numbers of war casualties which are anticipated.

Walter Kidde & Company, perhaps because they have been engaged for many years in the manufacture of life-saving appliances, have been most receptive to ideas relating to the rehabilitation of the disabled. A number of men and women with types of handicaps which would ordinarily be considered to render them unemployable have for the past two years taken an active part in essential war industry in the company's plants in New Jersey, on an equal basis with other employees.

### Many Types Employed

BESIDES the commoner forms of medical, visual and orthopedic limitations, our workers include a number of seriously handicapped individuals who have never before been employed. These range from an office staff member with extensive post-poliomyelitic paralysis, who is working with the aid of back and leg braces, to a drill-press operator in the shop who is deaf, dumb and blind. We believe the latter is still the only person with these three serious handicaps who is holding a full-time, full-salaried job in war industry. The man's native intelligence was normal and he was anxious to aid in the war effort, so in spite of limitations in his education it was possible by means of spelling out directions into the palm of his hand to train him on the basis of work simplification, or motion-study as applied to his handicaps, with highly successful results. His productive capacity is equal to or greater than that of most of his co-workers, and his fine attendance record has been an example to the others in his department. This courageous man travels to and from the plant alone, making two transfers en route; one of his colleagues guides him to the lunchroom each day, and to the bus, but aside from this he requires no outside help.

The measure of altruism which decides the employment of people so handicapped begins with the firm itself, and continues on down to those who train them. In this case, a blind deaf-mute was made a self-supporting man and an asset to the community by the willingness of a foreman to undertake more painstaking effort in training. The particular foreman who achieved this notable success is a Scoutmaster during his off hours, which may explain his successful approach to the problem.

A drill-press operator who is deaf, dumb and blind

Eight blind persons in all have been employed in the Kidde plants, and seven are still fully employed and doing excellent work. The one who did not remain with the company was the only individual not hired through the recommendation of either the State of New

# Walter Kidde & Company, Inc.

COLOR KEY | RED | CONTINUOUS | BLUE | OCCASIONAL | | NONE

COST CENTER_____

| JOB CLASSIFICATION | PHYSICAL DEMANDS | | | | | | | | | | | | | | | | | | | | | | | | EXPOSURE | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LIFTING 0-25 LBS. | LIFTING 25-50 LBS. | LIFTING 50 LBS. AND OVER | STANDING | SITTING | WALKING | CLIMBING | PULLING | PUSHING | STOOPING | ADAPTABILITY | ATTENTION | CONCENTRATION | VISUAL CONCENTRATION | COLOR VISION | DEPTH PERCEPTION | SEEING | TALKING | HEARING | USING ONE FOOT | USING TWO FEET | USING ONE HAND | USING TWO HANDS | TWO FINGERS | OUTSIDE | INSIDE | HEAT | COLD | WET FLOOR | DRY | DUST | FUMES | NOISE | OIL | WATER | ACID | GREASE | LEAD | THINNER | FLUCTUATING TEMPERATURES |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Remarks_____

☐ EMPLOYMENT
☐ RE-EMPLOYMENT
☐ REINSTATEMENT
☐ FOLLOW-UP
☐ TRANSFER

## Walter Kidde & Company, Inc.

## MEDICAL REPORT

DATE_____ 194__

NAME:_____ SEX:_____ AGE:_____ WEIGHT:_____ HEIGHT:_____ MARITAL STATUS:_____

EMPLOYEE NO.:_____ JOB CLASS:_____ PLANT NO.:_____ SHIFT:_____

### LIMITATIONS

| PHYSICAL DEMANDS | | | | EXPOSURE | | | |
|---|---|---|---|---|---|---|---|
| Lifting: 0-25 Lbs. | | Adaptability | | Outside | | Noise | |
| Lifting: 25-50 Lbs. | | Attention | | Inside | | Oil | |
| Lifting: 50 Lbs. or Over | | Concentration | | Heat | | Water | |
| Standing | | | | Cold | | Acid | |
| Sitting | | Visual Concentration | | Wet Floor | | Grease | |
| Walking | | Color Vision | | Dry | | Lead | |
| Climbing | | Depth Perception | | Dust | | Thinner | |
| Pulling | | Seeing | | Fumes | | Fluctuating Temperatures | |
| Pushing | | Talking | | | | | |
| Stooping | | Hearing | | | | | |

KEY: BLANK SPACE = FULL CAPACITY √ = PARTIAL CAPACITY X = NO CAPACITY

REVIEWED BY:_____ PHYSICIAN:_____

Personnel Department — Medical and Safety Section

A blind worker assembling the hose-and-horn of the Kidde carbon dioxide fire extinguisher. The wire hoop affixed to the supply box was devised by a set-up man to prevent the flexible hose from swinging into the worker's face

Jersey Rehabilitation Commission or the New Jersey State Commission for the Blind, and the experience in this case taught us the wisdom of depending upon the skill of such organizations in screening applicants.

Among the original seven, one blind girl, engaged chiefly on assembly work, is so rapid and efficient that she earns approximately five hours' bonus a day. Since her employment with us, this girl has cooperated in demonstrations of training the blind in industry, and she is the subject of a government film on the rehabilitation and training of the blind, made by the U. S. Office of Education, Program for Rehabilitation of Returning Veterans, which is released through Castle Films, Training Division. She is also assisting in a special study being carried on by New York University, Division of Safety Education. Her fellow-employees, with whom she is very popular, have devised special jigs to facilitate her work. Parts are put in small bins arranged in two tiers in a semicircle before her, and the girl places two valves in the jigs at one time, assembling nine parts and using a hammer and punch on each separate valve. She has virtually no rejects, because she checks and repairs her own work. This is typical of the performance of our blind employees in general, whose record as to spoilage is far better than that of workers with normal vision.

### Qualifications, Not Handicaps, Basis of Placement

THE fundamental approach in the placement of a handicapped person is the same as with any type of applicant—a careful consideration of the positive qualifications of the individual, rather than a negative focussing upon his disabilities. Viewed from this angle, the blind or one-armed worker may be less handicapped in relation to a particular job—an inspection

A blind worker in a plant of Walter Kidde & Company, shown assembling a valve containing nine parts and involving the use of a hammer and punch. A special jig designed by fellow-employees holds the valve in position. This girl has cooperated in the making of a government film on the rehabilitation and training of the blind, and also in a special study being carried out by New York University

procedure, for instance—than a structurally sound individual with less mental acuity. The problem resolves itself into a consideration of two factors—the abilities of the individual, and the demands of the job. These are the same two factors which apply in regard to any job and any applicant, except that where physical limitations are present, the abilities of the individual require more expert determination, and this is the sole province of the medical department.

A one-armed man might well be able to load pails of paint on a truck, a job out of question for the cardiac, whereas he would be unsuited to some assembly operations for which the latter might prove ideally qualified. An individual with little or no vision in one eye might be barred from testing procedures requiring depth perception, or for operating machines involving the estimation of distance, whereas a worker with a hernia might handle the one but not the other, and a legless man might be suited to both. In order to match the various capacities of the applicant with the demands of a job, Walter Kidde & Company have worked out a system which we feel will provide protection both to the worker and to the company, placing him to the utmost advantage and permitting sufficient interchange of duties for the physically handicapped to put him on an employment par with those whose limitations pertain to intellect, temperament or training alone.

### Abilities and Job Demands Charted

THIS system comprises a breakdown of the physical and mental capacities of the individual, and also the physical, mental and environmental demands of each job, expressed in similar terms and charted as separate components on two forms, as illustrated. It will be noted that the listing of personal qualifications in terms of job requirements, rather than as medical estimates, precludes any breach of medical confidence, which is always strictly observed. However, it enables the prospective worker's ability to lift specified weights, stoop, concentrate, withstand cold or wet or exposure to acids, etc., to be indicated in detail, with a blank space indicating full capacity, a check-mark partial

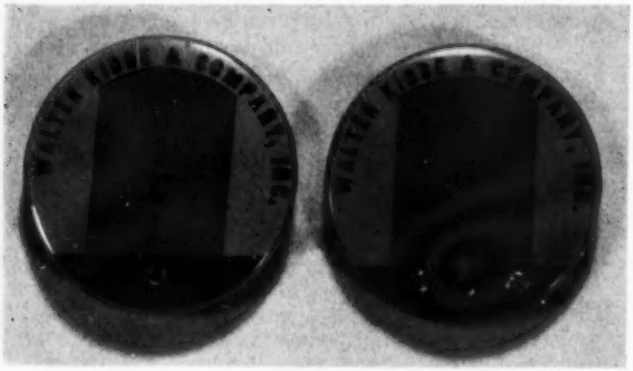
capacity, and a cross no capacity whatever. On the job demands chart, the same components are checked in red where the demand is continuous, blue where it is occasional, and left blank where there is none.

The procedure is as follows: An applicant is first interviewed by the personnel department and, if considered acceptable by them, he is referred to the medical department for examination. Here the chart of his capacities is filled out, and he then takes it back to the personnel department where it is matched against the breakdown charts of the particular job or jobs for which he is being considered. If a match is not achieved, every effort is made to find another type of job which the applicant is medically qualified to handle, but if no match can be found he is not hired under any circumstances.

Unfortunately, fitting a man to one particular job often does not solve all employment requirements. It frequently happens that, owing to production problems, a worker cannot be kept continuously employed on a single operation, or series of operations. A machine may have to undergo repairs or be otherwise shut down; a particular type of assembly may be discontinued, temporarily or permanently; contracts for some item being manufactured may be cancelled. Under such circumstances, the average capable worker can be shifted by his foreman to another operation, but in the case of a handicapped individual, a foreman would hesitate to transfer him to other work which might not lie within his capabilities. Here the blind or orthopedically handicapped man would be at an advantage, for his disability would be evident and the foreman would probably be an adequate judge of his fitness for another type of operation. But in the case of one whose physical or temperamental limitation is not externally discernible, as with a cardiac, a psychoneurotic or a person suffering from hernia, the foreman would have no way of knowing that he required special consideration in placement, or what other operations, if any, he was able to perform.

### Special Identification Badges for Handicapped

TO OVERCOME this difficulty, an employee whose physical or mental make-up imposes restrictions on the work to which he can be assigned, is informed at the time he undergoes his medical examination that it is not advisable for him to undertake all of the operations in the plant, and that this fact will be conveyed to his foreman without embarrassment to him and without any breach of medical confidence, by the use of an inconspicuous variation in his employee's identification badge. These badges ordinarily contain a single hollow rivet; those issued to the handicapped worker contain three. He is assured that the significance of this is not made known to the other employees, but only to himself and the foremen; and that the latter will not be told the nature of the disability, but will simply know that before transferring the worker to another operation, his capabilities chart in the personnel office must be consulted to make sure that job demands and physical qualifications tally. With this distinctive identification a worker is not exposed to the necessity of using his own judgment as to his fitness for some special task, nor to the embarrassment of discussing it with the foreman. The company, on the other hand, is not exposed to the hazard of having its employees suffer compensable injuries which could have been anticipated, through undertaking work for which they are not constitutionally equipped.



**Identification badges of average and handicapped worker, showing the three rivets which distinguish the latter to foremen**

### Plants Zoned as to Noise Intensity

IT HAS been found by many organizations employing men who have returned from combat duty that these individuals are particularly sensitive to noise, and this is also true of many people who have never before held jobs in heavy industry. The various plants of our company are therefore zoned into quiet, semi-quiet and noisy areas, and, as will be seen from the charts, the ability of the individual to withstand noise, and the amount of noise associated with each job, are included. Sensitivity to noise, however, is apt to lessen as it becomes more familiar and its cause is oriented in the subconscious mind of the worker. Handicapped workers are free to seek a change of status in this, as in any other, category by application to the personnel department.

### Proper Training of the Handicapped Essential

ONCE the suitability of a handicapped worker to a particular type of work has been determined, the question of his training comes into the foreground. The training of any worker is a keystone to success in his job, but more especially so in this group. As in the case of all employees, temperament, education, previous work experience and personal preference are all taken into consideration, but each handicapped applicant is considered as a special problem, and his training geared to his particular needs. The time and motion studies which have been made throughout the plants are further extended in the individualized training of those with limited abilities, and they are taught the simplest and most efficient procedure from the start. A number of these workers who have never before been employed are later designated as having the "highest record in the department," which points to the great value of an individualized approach in circumventing handicaps which, up to the time they were taken into our plants, had seemed to bar them from gainful occupation.

### Fine Records Established by Handicapped

THE high records established in particular by those with the more serious visual and orthopedic disabilities extend in several significant directions. Their rate of production ranges from "equal" to "better than equal" to that of fellow workers. Their spoilage record is extraordinarily low, being nil in the cases of some of the blind employees who check and repair their own work. Absenteeism is much less than average, and their effect on the morale of their departments in general is noticeably stimulating. Once trained, they require no special supervision. Furthermore, handicapped workers are not careless; our own experience has borne out this well-documented fact, and the 47-year-old records of the New Jersey State Commission for the Blind show no industrial accident suffered by

a blind worker during all of that considerable period.

In the last analysis, the controlling factor in the quantity and quality of any man's work—at least within those margins set by his mental and temperamental qualifications—is his attitude towards his job. To many a so-called normal worker, the job of the moment is a means to an end—and perhaps a temporary means. His heart is in it only in so far as it serves his immediate purposes. To the handicapped, however, a job on an equal basis with his more fully-endowed fellows—and especially just now, a job in war industry—is apt to represent an end in itself. It spells self-respect, financial independence, an opportunity to contribute directly to the war effort, and freedom from the shackles of his handicap. He gives to the work itself and to the company which entrusted it to him that fidelity which makes for quality of performance and for all-round dependability.

In summary, we would say that an industrial plant can expect to benefit by the employment of handicapped individuals if it will:

1. Be guided by the preliminary screening of such experienced organizations as recognized institutes for the blind and disabled, and the War Relocation Authority.
2. Use care in examination and proper job placement.
3. Train scientifically, with work simplification methods individually applied.

---

## Psychodynamics

*—In Industrial Medicine and Industrial Nursing—*

CHRISTOPHER LEGGO, M.D.,
*Industrial Hygiene Physician,*
*Ohio State Department of Health,*
*Columbus*

THERE is almost no function of a medical department in industry in which psychology may be ignored. In many instances we must view objectively the psychology of the employee; in others, we must view subjectively the psychology of those functioning in the medical department, the physician and the nurse. In some instances we must consider the psychology of the management, as represented by its lay representatives who may be in an administrative relationship to the medical department.

I ask that it be stipulated that industrial medicine and industrial nursing consist of two elements, (1) a medical care component modified to fit industry, and (2) a public health component also modified to fit industry. I also ask that it be stipulated that the greatest factor in the foundation of industrial medicine was the compensation law, and that the public health phases are secondary services, voluntarily assumed, and which have developed because of propinquity and are not the result of any primary legal obligation on the part of the employer, as is curative care for the industrially injured.

To develop the psychodynamics of industrial medicine in a logical sequence necessitates reviewing each function of the medical department, and evaluating its particular psychological component. For this I am using as a guide the sections of Chapter V, "Services which may be rendered by the Full-Time Physician in Industry," published in an outline by the Ohio State Medical Association in October, 1943.[1] We begin with:

1. PROVIDE *curative care for injuries which are the result of industrial accidents or illness from occupational diseases.*

Much of the psychological enters into proper curative care but, since it does not differ basically from that required in the curative care of similar injuries or illnesses treated in private practice from non-industrial causes, no time will be spent dwelling on it.

It should not be necessary to point out that the curative care must be adequate. Attempts to develop the other services to be described will likely be unsuccessful unless the foundation stone of industrial medicine and surgery is laid securely. This entails capable treatment, rendered promptly and willingly, with due consideration to the mental, as well as the physical, comfort of the injured. It is to be questioned whether any medical department is wise in attempting to expand its services until its house is in order in regard to its care of industrial injuries. The next function is

2. ASSIST *in controlling accidents and occupational disease hazards through cooperation with the personnel and safety departments of the industry.*

To avoid the time which would be necessary to discuss this phase I am taking the liberty of supplying a reprint from the October, 1943, issue of INDUSTRIAL MEDICINE, entitled "The Plant Physician and Safety Engineer—and the Cooperation Between Them." To emphasize a point or two, however, may I repeat that the industrial physician or nurse is in a strategic situation and prepared to assist the safety department by (1) obtaining the true story of the accident while the injury is still fresh, (2) learning of uncontrolled plant hazards through the close association with the employees, and (3) calling immediate attention to hazards which have resulted in freshly reported minor accidents, and which, if left uncorrected, might well result in major ones.

Conversely, the safety engineer through his association with the employee is often in a position to serve as a friendly interpreter between the employees and the medical department on the occasions when the policies or practices of the medical department are misunderstood or misinterpreted.

The attendance at safety committee meetings by the plant doctor, or the plant nurse, or both, also promotes a more intelligent safety program by correlating the physical causes of accidents with the physical results of the consequent injuries. Because of the knowledge gained at these meetings, the medical personnel can do much in personal education toward safety.

The problem of placing employees with temporary partial disabilities demands some special consideration, although its full exploration in the space of this paper is impossible. Medically it seems like a very simple question as to whether a given individual can or can not do light work. It becomes involved and complicated, however, by personnel, safety, and operating problems within the plant.

For example, John Doe, an unskilled laborer, becomes disabled because of an industrial injury. A Colles' fracture will serve for the purpose of illustration. The fracture is reduced and immobilized and the cast can be removed in two to three weeks. Physical therapy may then be instituted and in five weeks the patient may return to full duty.

There may be, however, a safety program being carried on in the plant with interdepartmental competition, possibly with cash awards for the best record for the prevention of "lost time accident" cases. John Doe's supervisors and fellow-workers alike will offer concessions and blandishments to keep John Doe on

---

Subject matter of a Lecture at the Third Post-graduate Course in Industrial Medicine, Long Island College of Medicine, November 2, 1944.

the job. To cut a long story short, some means is found to carry John, cast and all, on the payroll and prevent the recording of a lost time accident. If John is assigned to work which is actually useful, the situation is not necessarily undesirable. It will prove entirely satisfactory provided John is willing and anxious to return to his old job as soon as possible.

If, however, John is merely hidden out and "covered up" and he is being encouraged and paid to loaf deliberately, the seeds for a serious maladjustment may have been sown. About the time John begins to appreciate this new life of ease and to be impressed with the importance of his presence, even though idle, his fellows are beginning to tire of carrying his load and the foreman begins to demand productive effort from John. John rationalizes his situation and resents what he interprets as antagonistic efforts to drive him, a sufferer, to work by those who were so solicitous concerning his welfare such a short time ago. John's incentive for recovery under these conditions is impaired and, while healing is not delayed, his subjective complaints do increase. John will actually return soon to his full duties, since a Colles' fracture must reach a point where its recovery is undeniable, but he has learned a technique of escaping hard or unpleasant tasks, and he has tasted the fruits of sedentary employment, something he had never even contemplated previously. He will be heard from again, and, possibly again, and again, and again.

If the injury is of a type which must be evaluated on the basis of subjective symptoms rather than on demonstrable physical signs, John may have acquired himself a permanent 4-F classification as far as his old hard job is concerned. The safety record has been saved but the price may have proved most expensive to all concerned, and particularly to John. He is no longer well adjusted to the unskilled labor for which he was previously well fitted, and he has, unfortunately, acquired no new capabilities which would qualify him for any other type of work.

If all the John Does were classified as temporary total disabilities until they could return to the job in which they were injured, the apparent time lost would be offset to a great extent by this fact that the incentive to recovery would be greater, particularly in these days of disproportion between compensation and pay.

As a matter of fact, both procedures are proper and have their place and neither should be a matter of inflexible policy. Each temporary partial disability case should be analyzed carefully and the personality, character, and occupational capacity of the individual weighed against the type and value of the temporary easier work which may be offered him.

A somewhat analogous situation arises when there is no full- or part-time physician and the nurse is in a plant where the accident record is measured in terms of numbers of "doctor cases." Her situation, difficult at the best, becomes almost untenable when this yardstick of successful accident prevention is used. The pressure to exceed her professional limitations and carry a physician's responsibilities in order to avoid breaking a safety record by having a physician diagnose and treat the patient is evident.

Safety programs are aimed to prevent accidents and labor and management alike may well be proud of the many genuinely fine records achieved by the joint efforts of both groups. It is obvious, however, that when the practices described above are used to produce a statistical improvement, they do so by concealing the injuries, not by preventing the accidents. The ostrich represents the appropriate symbol for such a program.

To return to a general consideration of curative care, it should not be necessary to point out that it must be adequate.

3. CONDUCT *pre-placement physical examinations with an understanding of the physical requirements of various departments in which the applicant might be employed. In case of rejection, advice should be given to the applicant with respect to correction of his defect, if correctible, or appropriate advice regarding rehabilitation and the type of employment which would be suitable if the defect is not correctible.*

There are three attitudes in connection with this function which are of prime importance. The future existence of the pre-placement examination in industry will, I believe, depend upon their recognition and acceptance.

THE FIRST point is that the physician should carry out the pre-placement physical examination with an understanding of the job for which application is being made. It is assumed that the full-time physician in industry has learned the various physical job requirements in the plant in which he is employed as a medical examiner. Where the physician is part-time and carries out the physical examination in the plant dispensary, he also is likely to have learned the job requirements. When, however, the physician is a so-called "call doctor," he, the applicant, and the employer are all handicapped if he has not familiarized himself with the entire manufacturing process of the plant for which he is examining applicants.

There are other reasons for urging plant managements to invite practicing physicians to tour their plants. To quote from Chapter VI, of the Ohio State Medical Association bulletin, "The 'on-call' physician actually can do no more than render care for injuries unless he becomes converted to some extent into a 'part-time' physician. This requires regular attendance at the plant at a given time, and this is encouraged even though the first visits be as seldom as once a week. It is only in this way that the 'on-call' physician can become familiar with the plant, its employees, its policies, its hazards, its problems, and its medical equipment. This familiarity will greatly enhance the ability of the physician to advise the management concerning the medical and health questions which inevitably will arise."

If possible, it is usually preferable that the pre-placement physical examination be carried out on the plant premises rather than at the doctor's office. When the applicant is sent away from the company premises for the physical examination the procedure tends to be viewed as an isolated one, constituting a physical challenge involved by problems in transportation, loss of time, and applicant morale.

When the physical examination is carried out on the premises and the examination is obviously adequate and is made with due consideration for the applicant's privacy and personal feelings, it becomes a useful first step in the establishment of healthy employer-employee relationships. Many job applicants are apprehensive and ill at ease in the new environment to which they are making application. Many difficulties over pre-placement may be settled promptly and directly in an environment arranged to give them personal attention as self respecting prospective applicants, instead of being required to wait in a physician's office sandwiched in between his regular patients and inclined to feel that they are being tolerated rather than considered.

Furthermore, I would like to express the genuine, if pious, hope that the day will not be long postponed

when all physical examinations in industry will be carried out at least in the privacy of a cubicle. Where these examinations are carrried out en masse with six to 20 men of varying ages, standards and social status, completely naked going through the various tests like a factory production line, it is hard for me to believe that the practitioners of industrial medicine can altogether justify the higher esteem which they are being accorded. In view of the shortage of medical personnel and the tremendous employment turnover during the war, we should not be too critical of standards temporarily lowered because of existing conditions. To continue these practices, however, when the war and personnel shortages are no longer an excuse would be to perpetuate conditions which in themselves might prove sufficient to discredit the entire procedure with which they are connected.

THE SECOND point of prime importance is the philosophy of management and the physician in regard to the intent of the pre-employment physical examination. For the purpose of illustration we may take two extremes in philosophy.

The one philosophy holds that the physical examination is a protection to the employer and is entirely for his benefit; the physical standards are high, and arbitrary. It holds that the employer, in hiring labor, has the right to accept only the cream of the crop and summarily reject any or all in whom any flaw is found. It may also be held that the cause of rejection need not necessarily be known to the rejected individual. This point of view was a reality in the depression ridden 30's and it would be pleasant to believe that its disappearance since the outbreak of the war is entirely due to a fundamental change in philosophy and quite coincidental to the disappearance of the perfect specimen into the army.

The other philosophy presents an entirely different point of view towards the pre-employment physical examination. It holds that this examination is for the mutual protection of the employer, the applicant, and his fellow employees. It accepts that the employer does not have the right to expect the cream of the crop, but intends to reject only those who are physically unfit for the job available, and who if accepted will be incapable of meeting the job requirements, or would menace themselves or others by their physical inadequacy. Physical requirements are not set up arbitrarily but are evaluated on an individual basis of job applicant matched against job vacancy. Fortunately, even during the depression days, this philosophy was subscribed to and practiced by many firms, and it is my belief that those who did exercise latitude in accepting employees with disabilities were rewarded by a happier morale and better employer-employee relationships.

In this connection it has been my observation that the applicant accepted with a known defect and a disability which he admits at the time of employment is not the employee who presents the chief placement problem due to physical conditions. He realizes that his employer is in no way responsible for his condition, and he accepts, when he tackles a job, that he must compensate for his known defect. If it is a defect with which he was born or which he developed in childhood, he has probably already learned to compensate perfectly during his school years. It is the employee who has developed a similar disability while in the employ of a management, and which, justly or unjustly, he believes is directly chargeable to his employer, who is often the real adjustment problem. He is likely to demand that the employer should do all the compensating for his condition, and job placement, wages, and special privileges become the basis for an increasing mutual dissatisfaction.

To return to the two conflicting extremes of philosophy of the pre-employment physical examination, I believe that the perpetuation of this practice greatly depends on a general acceptance, permanent and not for the duration only, by industry at large of the second, the broader and more tolerant, philosophy. Where the pre-employment physical examination is used as a means of discrimination with all the apparent advantages in the employer's favor, I believe that eventually its abandonment may be forced. Where, on the other hand, it is of mutual advantage to all those concerned and is used to screen out the unfortunate few who actually do not, or cannot fit, then I believe its permanent perpetuation is assured.

THE THIRD important point refers to the rejected applicant. I believe that some social service work is demanded and must be supplied. If his defect can be corrected it is tragic to think of his being rejected without explanation as to what correction is in order, and without advice as to what treatment is necessary to make him employable and where and how, his financial capacity considered, this care may be obtained. If his condition is not correctible, then he should certainly be advised as to what type of work he should seek which may be compatible with his condition, or else be referred to some agency if he is entirely unemployable and some type of assistance is required.

4. CONDUCT *special examinations for workers exposed to toxic substances periodically as required by the nature of the exposure.*

In view of the fact that these examinations are only necessary in those industries with special hazards, no comment is considered necessary.

5. MAKE *routine periodical physical examinations on regular employees with proper advice regarding defects.*

The conducting of routine physical examinations was widely practiced before the war, but of necessity has been abandoned or carried out less frequently since a large labor turnover has overloaded medical departments with pre-employment examinations.

There is one distinction between the examination of the applicant and the periodical physical examination of the employee which to me is very real and deserves stress. With the applicant who does not come up to physical standards and who must be rejected because of his condition, bargaining is in order. He may be accepted for employment with the proviso that he undertake adequate treatment for his condition and that his status as an employee is continued only as long as he honors his half of the bargain.

The periodic physical examination of the old employee presents an entirely different set of circumstances. Whether the employment has existed for a day or for 30 years, the principle remains the same. He has an established job right and a job seniority. I do not believe that conditions of employment can be made retroactive. This principle should be applied, in my opinion, in evaluating the defect which does not interfere with regular attendance at work, or interfere at the moment with the employee's capacity for work and is not infectious. This would apply to a multitude of physical conditions which can be classed as personal and which are non-industrial and non-occupational. If the condition is a communicable disease in an infec-

tious stage, of course the well established law of public health demands removal from work as long as the condition is infectious. This is for the protection of others. If the condition progresses to the point where it does begin to interfere with the employee's ability to work, or his effort to work is resulting in a menace to others, then bargaining is in order. It may be that a job requiring less physical demands is required for the employee to remain at work, or to keep a reasonable attendance record. In that case it is perfectly fair to offer him a job readjustment only on condition that he seek to help himself by placing himself under adequate medical care.

In the face, however, of certain criticism from those who disagree with these views, I reiterate that it is not the function of the industrial physician to bully, police, threaten, or blackmail at the expense of his job, an employee into seeking medical care for a personal ailment which does not interfere with his ability to work or does not threaten infection or dangerously expose others. As a matter of fact this philosophy seems not only to fit in with the ethics of private practice but it also fits the more recent philosophy of public health. In the early days of public health, coercion by means of the law was a popular modality. The last generation has swung to education in its various phases as being more effective than force. It is perfectly reasonable, of course, to point out the ultimate effect of the disease if it is not medically controlled, and to prophesy an eventual job loss through disability.

The approach advocated will likely prove most effective. Employees who decline to accept medical advice when it is first offered can be kept under observation and the advice repeated at favorable opportunities provided their resistance is not aroused by antagonistic personal attack on the occasion of their original unwillingness to act on the suggestion. If a plant medical department cannot win sufficient confidence among the employees to have their advice generally accepted, then their ability to correct personal physical conditions by pressure is more than questionable.

6. RENDER *to the employee while on the job reasonable first-aid, or offer advice for non-industrial injuries or illnesses.*

Industrial medicine is relatively new. No indelible line has yet been drawn irrevocably and permanently between the medical department in industry and the private practitioner. Variations in practice can be found ranging from the rudiments of care for the industrial injury up to complete medical and hospital care for the employees and their entire families. There is, however, a standard acceptance of the limitations described in the above paragraph 6. As a matter of fact, one of the greatest justifications for the existence of the physician and nurse in industry lies in this service. It is granted generally that the treatment of any non-occupational condition which is at all prolonged, or involved, or of long duration, should not be undertaken. The treatment of these conditions belongs in the sphere of the community, not in the sphere of industry, and is the function of the private practitioners and established medical care agencies. The average employer finds more than sufficient responsibilities in his business interest to keep him worried and occupied without seeking to burden himself with the liabilities incurred when he undertakes the responsibility of the private practice of medicine for all his employees.

The employers, however, or the medical department who take the attitude that their medical service will be limited entirely to those conditions definitely due, or suspected of being due, to industrial injuries or occupational conditions are depriving themselves and their employees of invaluable services. A golden opportunity is presented by encouraging the employees who have physical complaints which they consider not yet serious enough to justify outside medical advice, to consult the plant medical department. Some of these complaints are based on conditions so trivial that they may be dissipated by a friendly word of reassurance; others are of such a minor nature that a modicum of treatment will cure them. Others are portents of medical disaster, and these, properly cleared to community physicians at an early stage, result in a saving of health, money, time and sometimes of life.

At this point may we emphasize the important role of the industrial nurse because her part in this function as well as in the several to follow, is tremendous. It must be emphasized that the industrial nurse is not, to use a railroad colloquialism, a "boomer." The longer she is employed in a given plant the longer she is likely to remain. She has learned the first names of the employees, their family affairs, their joys and troubles, and the feeling in her grows that they are her particular flock. In their turn they have become more and more at ease with her, and the path to her door becomes increasingly worn. This confidence cannot be built up overnight. Once it is established it constitutes the nurse as a respected adviser, and her quarters as a clearing house for employee health problems. This is health education in its most effective form—personal advice supplied when it is most needed and supplied from a source respected as dependable and trustworthy.

This role of the industrial nurse is emphasized deliberately for it is she who sees all the employees and screens out those who require consultation with the doctor. No matter how capable the industrial physician is, he cannot reach full efficiency unless he is flanked by nursing service of this type. Very closely allied to this service is:

7. CONSULT *with those suffering from any situation causing maladjustment to work; offer proper advice or refer them to private practitioners or community agencies where indicated.*

The importance of this function, so closely related to paragraph 6, cannot be overemphasized, and its value is almost entirely based on the conscious or subconscious practice of psychology. Again, the part of the nurse must be emphasized; she, possibly even more than the industrial physician, is conscious of the maladjustments revealed daily and is acutely aware of the necessity and the value of adequate readjustment.

IF JUSTIFICATION limited to one short sentence were demanded for a medical service in industry, I believe that the sentence would be to the effect that "Industrial medicine serves to keep employees and their working environment in adjustment." Let us take the simplest example. An employee suffers an abrasion to the tip of his finger by striking it against a machine. He is handling packages and he leaves a bloody finger-print on each package. He is out of adjustment with his job. By the simple expedient of a bandage or dressing he is able to return to work and is again in adjustment. The injury may be a very serious one and the maladjustment serious and prolonged but there is no change in the principle. These maladjustments are due to physical causes.

In regard to the mentally maladjusted, I believe that

the opportunity to practice useful psychology is greater today in industry than in any other field. Although the techniques used may not always be based on the most scientific principles, nor the skill with which it is practiced be the most highly developed, in those factories where the psychic approach is successfully utilized, I believe it proves invaluable. The reason for this is simple.

Consider for a minute the task of the highly trained institutional psychiatrist. He is dealing with those who have bent past the breaking point and are psychically broken; completely out of adjustment with their occupational and home surroundings. They are institutionalized, figuratively having been discarded into the psychic scrap heap. The institutional psychiatrist's energy and skill are directed into efforts to salvage those who have been scrapped. He does salvage many, but the number broken beyond repair is still tragically large. He is on the wrong end of the conveyor belt. Those who have been conveyed to his charge require complete reconstruction.

Compare this situation with that of the medical department in industry. The latter is consulted concerning early maladjustments when the usefully employed patient is just beginning to bend. Readjustment of stresses or of attitudes may relieve the tension immediately, and the bend is straightened back to normal without a trace. It is impossible to estimate how many breakdowns may have been prevented by the intelligent, even though subconscious, practice in industry, of the rediscovered and newly-named art of psychosomatic medicine.

Any personality may be graphically presented as a triangle, the base representing heredity and the sides representing training and environment respectively. If we convert the triangle into a circle with that segment representing heredity as being inflexible, but the segments representing environment and training as being flexible and subject to the laws of hydrostatics from pressures within or from without, we have a diagram on which we can illustrate crudely but graphically the psychodynamics of any individual. Now if we consider the contents of this flexible bag as consisting of the internal tensions, moods and emotions of the individual, we can follow with some approximation of correctness the extent and nature of distortion to be expected in a given individual to an external pressure, the nature and severity of which is recognized.

We cannot change heredity, because it is too late for anyone to select new grandparents, but we can learn much that will prove useful about the individual's heredity if our history taking is skillful. The training of an individual can be more easily learned and evaluated and can, within limits, be altered.

The environmental background of a patient is of the utmost importance and it is in this regard that the industrial nurse is in a strategic position because of her knowledge of the patient's make-up and of his home and working environment.

To understand the normal psychology I believe it is of help to study the abnormal—the psychotic. Those who have become psychotic are the caricatures—the extreme exaggerations of the normal. We who still pass as normal all go through in miniature what the psychotic undergoes in extreme. We, who normally dwell within ourselves paying but secondary attention to our environment, have our own day dreams into which we find, a mild, pleasant, and harmless escape from some uncomfortable reality. It is only if we make our escape from the world complete by living entirely within our dream world, completely oblivious to reality, that we become schizophrenics. We who customarily associate the outside world with most of our emotions have our periods of outside activity into which we throw ourselves to escape from our normal discontent with our own internal selves. It is only when we escape from ourselves into the outside world entirely and in all directions at once, to the complete disorientation of ourselves and our affairs, that we are labelled manics.

The formal psychiatry to which I was introduced at medical school taught me only the names of a number of pigeon-holes in which we were to pocket individuals who had a given set of mental symptoms. It was dry, colorless and static. Psychiatry, and psychology, must be viewed in terms of dynamics to be understood. To me, "The Human Mind"[2] by Menninger proved of great assistance in allowing me to visualize psychodynamics as a reality, and, in recommending it to those of you who may not have read it, I only hope that it will live up to the expectations I am inclined to ascribe to it.

THERE are three techniques by which the emotionally maladjusted may be aided.

(a) One of these is by a change of the patient's attitude. This has the effect of changing the internal tension and removing the pressure from within, which is in conflict with the environment.

Examples of this technique are so numerous and so simple that I believe it is usually practiced unconsciously. As an example, an employee displays a worry over some notice or rule which has been posted. He (or she) feels that it is aimed at him personally because of some incident in which he was involved. An adequate and convincing explanation accounting for the injunction on purely impersonal grounds dispels the worry of the individual. So many dozens of these incidents occur each day that it would be futile to attempt to illustrate all of them. In everyday language they are called "misunderstandings" and are "cleared up" by change of attitude on the part of those who are involved as a result of an explanation.

(b) The second technique is to change the environment. Not all complaints, unfortunately, are results of misunderstandings. Some of these situations are understood only too well, and the fault does lie in the environment, or in the attitudes or actions of fellow employees, supervisors, or in outside social or family associations. Supervisors can be unjust or unreasonable. People can be victims of prejudice or dislike. Lighting can be inadequate, and dusts and fumes can be nuisances or give rise to symptoms. When the environment is changed, either by physical means as in the control of a dust, or by personnel changes where such are necessary, the complaint is removed and the individual is adjusted to the newly created environment.

Many times a combination of both techniques is necessary and there must be a change in attitude as well as in environment.

(c) A third technique is necessary when neither of the previous techniques is adequate. Here the individual must be placed in a new environment entirely. Many times stations can be found in other departments in the same industry, and here the individual may fit well. Occasionally it is impossible for one to adapt to any environment available in the industry, and his only salvation lies in seeking a new occupation to which he may prove able to adapt.

At the risk of over-simplification I think we may describe an employee as living in three areas; his

working area; his social area, which includes his family and affairs, his love affairs, his hopes, etc.; and his financial area. It came slowly to my observation that seldom is an individual seriously maladjusted in one area without his becoming maladjusted at least to some extent in the other two. Every industrial physician or nurse can identify immediately the type of individuals who are perpetually sick, in trouble, or injured. If they fail to come in for assistance of some kind at least every 48 hours, the medical staff is likely to believe they are angry and have withdrawn their patronage. At the same time it is likely to be found that they are frequenters of the personnel department, both their finances and their family affairs being so tangled up that they are continually in need of assistance or reproof (unfortunately finding the latter more readily obtainable than the former).

It was a long time before I realized that, at least in my experience, the personnel of this cast of characters was not constant, but that they were new recruits replacing those who graduated. On reviewing these cases who had graduated and were no longer problems I was surprised by the number who were in completely different departments doing a different type of work, at a different wage level, and were fitting well in their new capacity. It was further noticed that they no longer were in financial straits. It was also observed in some cases that their domestic situation was completely altered, or, at least was no longer attracting attention.

Further contemplation proved it to be impossible to form an opinion as to what was responsible for the entire change. There is an old theory in regard to a group of warts. If the so-called "mother wart" could be identified and eradicated, all the satellite warts would spontaneously disappear. I believe there is a parallel. One of the maladjustments was a "mother maladjustment." It may be that the straightening out of the financial matters preceded and improved domestic relationships and an occupational readjustment followed. It may have been some actual change in employment, or in supervisors, or in working conditions, resulting in a happier frame of mind which led to a resultant domestic felicity and a facing of financial realities.

These personal maladjustments offer another field in which the physician can offer leadership in building a cooperative program with the personnel department, and other departments in developing counsellor service, either as an adjunct to existing services or as a formal separate service.

At any rate the fact that these readjustments do occur and rehabilitation can take place without severance of employment should be encouragement to those managements who do attempt to find departments where maladjusted employees will fit, even though it does require fatiguing and repetitious experimentation with various stations in the process.

Of course actually relatively few of any normal employee group are potential, let alone **early**, psychotics, although it is sobering to realize that approximately one person out of 10, throughout the country's population, will eventually have been institutionalized for at least one admittance. The case load in the psychological field in industry is composed chiefly of two groups, (a) the psychosomatic group in whom a very strong emotional component is involved with physical symptoms, and (b) the group including simple anxiety states at one end of the spectrum and the psycho-neurotics at the other.

It is not advocated that each industrial doctor, let alone each industrial nurse, embark with a gay spirit of adventure into the tragic seas of psychoanalysis, or undertake to probe into the love life of each employee who enters the medical department. Those who have the sixth sense are usually aware of it and are aware of their own limitations. Those who do not sense mild emotional disturbances in their associates are likely to find their efforts in the psychic field to constitute nothing more than meddlesome trouble making. Certainly consultation and advice in this field, to be effective, must be as expert as those demanded in any other medical field and they should be as readily available. This is emphasized by the phrase in the second paragraph, "Offer proper advice or refer them to private practitioners or community agencies where indicated."

Our whole discussion has been based upon the presence, in at least a part-time capacity, of a physician and a nurse in industry. In the small community where no industry is large enough to support even part-time medical personnel, only a slight readjustment is necessary in the point of view expressed to achieve, at least partially, the same result. The local general practitioner is well versed in the personal medical history, the hereditary make-up, and the community environment of his patients.

With an adequate knowledge of conditions in the local plant, and in the presence of free and harmonious relations with those who are handling personnel relationships, the local practitioner can be of great assistance to both the management and the employee, in placement problems. If this field were explored, I believe it would be found that there exists a gold mine of opportunity for service to small plants by utilizing the present knowledge and potential interest of the local physician without assuming that a formal and elaborately described program must be drawn up. Where these present existing resources are tapped, I have no doubt that some programs will develop which can be interestingly presented in written form. They are likely, however, to evolve rather than be initiated in their complete and final form. As a matter of fact, I believe a search in small communities would uncover a number of situations where the existing relationships between the local general practitioner and local industries would illustrate that much of the service we have been describing is already being rendered to small plants.

Another subject which is pertinent to this discussion, and can be touched on only briefly, is the psychological attitude to be taken by managements on the subject of "absenteeism." Absenteeism is a personnel problem. Only such absenteeism as is caused by sickness or by accident is a medical problem. If all absenteeism is to be investigated by home visits it is my belief that it should be investigated by the personnel department. It is a perfectly sound practice for a medical department, through a visting nurse, to visit those who are believed to be absent because of sickness. If the nurse finds the cause of absenteeism to be due to any cause other than illness then I believe the information transmitted to the management should consist of this one simple statement—"Absence not due to medical causes," unless of course, some situation exists which the employee or his family desires to have communicated to the management. Where a nurse is employed to check on all absentees, I believe she is being asked to assume a personnel function which should not be transferred to a medical department, nor undertaken by it. The psychological problems involved in absenteeism may lead many a truant to the

medical department, but this does not justify medical personnel in accepting the role of truant officers.

8. TAKE PROPER *steps which may be indicated to control communicable diseases among employees, including notification to the local health officers.*

This function is almost a pure public health function and as a rule can be executed with a minimum of policing. It should be exercised by *persuasion* rather than *suasion.* The greatest problem is not presented by diseases such as smallpox and typhoid but by the acute upper respiratory infections and the so-called "flu." The character is familiar in industry who appears in the medical department one hour after his shift has started, who looks badly and feels worse, and whose temperature registers at least 101°, who always admits that he felt sick before he left home but "thought he could make it." He always seems to ride with seven other passengers, all of whom are now thoroughly exposed, as well as those who work near him. He, moreover, usually lives in some inaccessible neighborhood and it is necessary to find transportation to take him home. In so far as this practice can be prevented, the absentee problem will be strikingly improved.

One special problem which is ubiquitous and which does not promise to be reduced by the effects of war is that of alcoholism. To those who wish to read a short, concise, practical and extremely useful treatise on the subject, I would recommend "Common Sense in Drinking" by R. R. Peabody. This little book has the additional advantage of being very readable and its use as a one-volume circulating library among the employees in the plant is suggested.

9. MAINTAIN *general supervision over health conditions in the factory and over health education carried on by personal interview or through literature for employees as a group. Special health programs should be initiated where facilities are available, such as examinations for tuberculosis, etc.*

This includes, of course, an engineering control over the working environment as well as medical programs for health conditions. To discuss this from the point of view of psychodynamics leaves little to be said except in regard to the general attitude which may be assumed by management and others interested.

It has been my observation that managements are unwilling to accept tuberculosis, syphilis, pregnancy, child-spacing, home nutrition, and a number of other conditions as being their primary responsibility. When public health personnel have approached management with a demand that they assume these programs as a direct employer responsibility, they have usually met with refusal. The employer seems to feel that these conditions are primarily community responsibilities which exist whether the local industry is operating full-blast or shut down completely.

When, however, official or non-official agencies have accepted that theirs is the primary responsibility in these matters, the employer is usually willing to recognize and admit that he has a secondary interest, and that any cooperation he can offer will result in an over-all improvement in the health of his employees because of the improved community conditions. On this basis he will usually cooperate willingly with any program demonstrated as being practical and timely.

If these programs are initiated as community public health programs I think it is legitimate to advocate that their status be maintained as such. This applies for example to the venereal disease finding program which may be launched enthusiastically as a public health measure but converted, if not properly controlled, into a discriminatory denial of employment by some employers who obtain the actual results of the serological tests instead of the statistical summaries only, to which they are properly entitled.

10. "KEEP ACCURATE *records of all services rendered with statistical summaries which will supply an index for health conditions and may point to particular health hazards which may be subject to correction or control.*"

Quoted also are the following editorial remarks: "The examinations referred to above are medical procedures. For that reason accurate records should be kept and the information should be treated as confidential to medical personnel except when permission is granted by the patient to reveal the data or a report is required by court order.

"The employer should be informed of the physical fitness of the applicant by a code such as that recommended by the American College of Surgeons:

"Class A or 1. Physically fit for any work.

"Class B or 2. Physically underdeveloped or some minor anatomical or other correctible defect; otherwise fit for any work.

"Class C or 3. Fit only for certain employment when approved and supervised by the medical department.

"Class D or 4. Unfit for any employment."

There is no need to elaborate on these self-explanatory recommendations. They are more than idealistic. Where there is a full-time physician, or part-time physician, they are all practical. Where the physician is "on-call" some compromise is necessary, but a well rounded medical program is not likely to be produced under these conditions because the situation is already compromised.

After all, it is not the details of technique, or the fine points of procedure, which spell success or failure for a medical department. It is the attitude of the medical personnel and the management, and the spirit with which the service is rendered that decide its acceptance or effectiveness.

The medical department must be fair and honest at all times in its dealings with employees. It must be as ready to fight for the rights of a just claim against the employer as it is to testify against the occasional unjust claim filed on an employee's behalf. The employee is entitled to the benefit of honest doubt when doubt exists. When this attitude obtains, much leeway can be allowed in procedure and the employer and the employee will both benefit by the service which is rendered to the employees.

In regard to the currently important question of the returning veteran, the aim of those interested in the rehabilitation of the veteran is to have him return to industry as an adjusted employee. The more competent he is to fit in again as an employee, and the fewer concessions which must be made which stamp him as a marked individual, the more perfect will be his readjustment. Therefore, we feel that the entire substance of this paper has a bearing on the future of the veteran.

War has been a detour for him. The earlier and the more completely he can return to the main road of productive peace-time useful employment, the better. He will have psychological attitudes common to his fellow veterans, as well as particular psychological attitudes developed as a result of his personal experiences. If he suffers a disability, he will have a third set of emotional components.

To offer him employment and to ignore his changes in attitude will result too often in an early maladjustment and a quick termination of his employment or a quittance on his part. His excursion from the detour of war back into industry will have proved, then, to have been a short blind alley.

If there is full realization of the psychodynamics involved in normal placement and we can learn early enough how the psychology of the veteran has changed since the day of his induction we may then, and only then, hope successfully to have a high percentage adequately re-placed. Each veteran so re-employed in industry will have left the detour of war and will find himself not in a blind alley, but on the road back.

**Bibliography**

1. Committee on Industrial Health, Ohio State Medical Association: "Fundamentals in the Organization and Operation of an Industrial Health Program by a County Medical Society—An Outline Prepared and Distributed by the Committee on Industrial Health", published by The Ohio State Medical Association, 1005 Hartman Theatre Building, Columbus 15, Ohio, October, 1943.

2. MENNINGER, KARL A.: "The Human Mind." Published by A. A. Knopf, New York, 1930. Second Edition, 1937.

3. PEABODY, R. R.: "Common Sense in Drinking." Published by Little Brown & Co., 31 Beacon Street, Boston, Massachusetts, 1932.

## Small Plant Industrial Health Program

*—Snap-on Tools Corporation—*

H. V. ERICKSON,
*Director of Health and Safety, Snap-on Tools Corporation,*
and
C. E. PECHOUS, M.D.,
*Chairman, Committee on Industrial Health,*
*Kenosha County Medical Society,*
*Kenosha, Wisconsin*

THE Snap-on Tools Corporation is not a large industrial concern. In normal times we employ between 400 and 500 people. The purpose of this paper is to give concrete proof that a health program is feasible and workable in a small industry. It is hoped that our experience may be of some benefit to others.

When the Lend-Lease program was inaugurated, we found it necessary to increase the output of our shop. It was, of course, essential to increase our manpower accordingly. Labor was plentiful, and we had no difficulty in picking up the men needed. Many of our new employees had never worked in shops before. Lost time due to accidents and sickness increased completely out of proportion. Our country's entry into the war enhanced our problems. A great number of our younger employees were called to service and labor became scarce. Those applying for work were mostly woman and middle-aged or handicapped people. These were employable, and as a rule made unusually good workers but created a hazard that we had not encountered before. Many seemed to be susceptible to skin rashes or dermatitis. Hernia cases increased and back strains were very prevalent. These ailments were causing a great deal of lost time, which meant lost production. We could also see trouble ahead with our insurance and retirement program.

In order properly to protect the employees and also their employer, some drastic changes in our safety and health set-up were going to be necessary. The women were doing a grand job of filling posts vacated by men going into service, but they created many new health and safety problems. In planning to meet the situation, we made a study of several plants and went through a great deal of literature.

Investigation disclosed that very few plants as small as ours had a comprehensive health program. To employ a full-time physician was out of the question. Our small city had a definite shortage of doctors, and those available were already overworked. Contact with them proved that they were very skeptical about taking over any kind of industrial set-up. The Council on Industrial Health of the American Medical Association assured us, however, that something could be worked out, and proceeded to enlist the cooperation and active interest of the county medical society. The Kenosha County Medical Society then formed a Committee on Industrial Health. This later proved to be a great benefit to us—as a similar committee in any locality will be to any shop working on an open panel. More will be said of this later.

The management of our company had decided to go all the way and install a complete health program, with proper follow-through to keep it up to date and complete. We therefore picked the good points of several plans we had studied and incorporated them into one program.

Such a program was a big undertaking in view of the fact that we had only a moderately well equipped first aid room. A meeting with the doctors gave us some ideas as to what would be needed. We increased our facilities to a four-room hospital—a waiting room with seating capacity for 12 people; a dressing room, well equipped, with instrument cabinets, adjustable chair, illuminated magnifiers, sinks and sterilizers; and two wards with hospital cots and examination table, the wards being quickly convertible to examination rooms when the occasion arose. Other equipment necessary for complete examination was ordered, except for x-ray. This service was available at a local laboratory and could be used whenever recommended by the physicians.

During the period of expansion and while waiting for materials, we conducted an educational program. The employees were, of course, somewhat doubtful of our intentions and feared that if they were found defective in some way that they would lose their jobs.

We could foresee many difficul-

### INDUSTRIAL HEALTH PROGRAM

IN ORDER to clear up any questions or misunderstandings regarding the physical examination program, it was deemed advisable to make a complete explanation.

The program is intended to better the health of the employees or to keep them on a good healthy plane. The company expects to benefit in no way other than the gain derived from its employees being healthy and, we hope, happy.

All histories will be taken by one nurse only and the material is strictly confidential. No one has access to the files but the nurse and doctors. The examinations are made by good, reputable doctors of proved ability. The results of the examination are all tabulated on the examination sheet and, together with the recommendations, are filed with the individual's history. Results of examinations cannot be given immediately as it takes several days to get all the data.

It is the privilege of each employee to go to the nurse and ask to see his folder, which will contain all the data. Please do not ask about any one else because we cannot divulge such information.

Persons found to have a disability or an ailment which is aggravated by the type of work they are doing will be so advised. In no case will any one be taken off their present job and shifted to other work because of health, without their consent. Placement properly done is the backbone of a program such as this; improperly handled, it could easily ruin the entire set-up.

This program is for you. How it proceeds and to what conclusions it comes are up to you. Your cooperation will help us make Snap-on the healthiest and safest place in town.

—LABOR MANAGEMENT COMMITTEE.

ties that might be encountered from the placement angle, not only with people now in our employ but also with servicemen returning after the war. With this in mind, we decided that our plan was to consist of the following:

1. Pre-employment physical examination:

(a) recommendation for placement;

(b) check for allergy for certain jobs.

2. Complete physical examination for those already employed:

(a) recommendations for placement.

3. Periodic re-check on persons with certain physical defects.

4. Periodic re-check on persons in certain departments.

It was our intention to stress placement to the examining physicians. The personnel department usually had a number of openings, and it was of great assistance to them to know the type of work a person was particularly suited for.

Some of our work is particularly oily, or the worker is in contact with chemicals and fumes. In these places, it is well to know if the individual is allergic to the things he must contact.

We wished to go back and examine all old employees to complete our records and make changes where persons were on jobs that might be injurious to their future health. Persons found to have ailments were to be re-checked periodically, and it should be left to the medical profession to determine if their work was in any way undermining their health or causing their ailment to be aggravated.

In departments where dust, chemicals, fumes, or excessive smoke would be incurred, we deemed it a good precautionary measure to check the personnel every three to six months. This may not be necessary. As time goes on we will come to definite conclusions.

Every issue of our bi-monthly house organ carried an article concerning health and safety. For three months we carried through thoroughly to lay out and explain the entire program. The union approved the plan, and the Labor-Management Committee issued a statement to satisfy the most skeptical.

All this resulted in our employees becoming enthused and willing to participate. The plan was so well sold that most of the women asked for complete physical examination, which was not compulsory. During the period of employee education, we had stressed personal cleanliness as related to industrial health. A marked decrease in dermatitis was noted. We have carried through on that phase a number of times since, and will continue from time to time.

All the histories were taken by one nurse to give the employee a greater sense of security as to the material being confidential. The history blanks are very complete, and we were careful to incorporate the name of the family physician. (See pp. 186, 187.)

The doctors could be assisted and the program speeded by completing the histories ahead of time. The taking of the histories was started a number of weeks in advance of examinations. The doctors could handle between 20 and 30 persons in an evening, so, in order to keep things running smoothly, all preliminary work should be completed ahead of time.

After several meetings with the chairman of the Kenosha County Committee for Industrial Health, a panel of six doctors was picked to do the examining. The physicians

SNAP-ON TOOLS CORPORATION

PHYSICAL EXAMINATION

Name_____

Occupational History_____

Height_____ Weight_____ Usual Weight_____ Temperature_____ Pulse_____

Vision: Right_____ Left_____ Corrected: Right_____ Left_____

| | Normal | *Record Any Abnormal Findings* |
|---|---|---|
| Eyes | | |
| Ears | | |
| Nose | | |
| Tonsils | | |
| Thyroid | | |
| Teeth | | |
| Heart | | |
| Blood Pressure | | |
| Lungs | | |
| Abdomen | | |
| Hernia | | |
| Glands | | |
| Varicose Veins | | |
| Back | | |
| Skin | | |
| Extremities | | |
| Reflex | | |
| Rectum | | |
| Urine | | |
| Wasserman | | |

Recommendations:_____

_____ M.D.

_____ M.D.

Examining Doctors

Family Physician_____ Address_____

Dentist_____ Address_____

Eye Doctor_____ Address_____

This authorizes you to file and use this physical examination information in the Snap-On Tools Corp. Industrial Health and Safety Department, and authorizes you to make the information available to the examining doctors, and when I request it, to my family physician.

Date_____ Signature_____ Witness_____

| *Follow-up Interview Date* | *By* |
|---|---|
| | |
| | |

| *Follow-up Treatment Date* | *Treatment* | *By* |
|---|---|---|
| | | |
| | | |

decided to work in teams of three. Examinations were held one evening a week. In that way, each doctor had to report only once every two weeks. We were making every effort to work things out in such a manner as to use a minimum of the doctors' time. Working in teams of three was the plan laid out by the physicians. They divided the examination into three sections, and each took a section. The eyes, ears, nose, and throat were the first section; lungs, heart, and abdomen were the second part; and the third comprised the lower extremities, reflexes, and blood sample for Wassermann test. Urine samples were usually checked after the examinations were completed. Laboratory facilities including centrifuge and microscope were provided.

The first evening of examinations was more or less experimental. Ten persons were to be put through as a pilot run, so that any difficulties could be located and ironed out. Our nurses had all preliminary work such as weighing, temperatures, measurements, and chart test on the eyes done before the doctors went to work. Procedures had been so well planned and laid out that everything went very smoothly. It was then decided that between 20 and 30 could be handled in an evening. Time schedules were laid out accordingly, so the employees had very little waiting time when they reported for examination.

Each employee, upon reporting to the first doctor, carried the folder containing the history and examination blank. The doctor made the proper notations upon the blank for the portion done by him and returned it to the folder which was then carried to the next doctor. Upon completion of the evening's work, the examination blanks were all signed by the doctors doing the examinations. Recommendations were also put on at that time. Blood samples had to be sent out for the Wassermanns, so it was necessary to have three or four days elapse between the time of examination and notification to the employee of findings and recommendations.

At the employee's request, a copy of the examination blank is sent to the family physician whose name appears on each blank. To maintain the open panel and keep it on a good ethical plane, it was very important that the family physician always be kept in the foreground. In order to keep our records up to date and in good standing, we enclosed two other forms to the family doctor. (See forms at right.)

SNAP-ON TOOLS CORPORATION
Department of Industrial Health and Accident Prevention.
Physical History of Applicant or Employee.
Strictly Confidential.

Health is our greatest asset and all should appreciate good health. Our Company is very vitally interested in better health for all of our employees; therefore, our Industrial Health and Safety Program includes physical examinations. Your complete history is essential and necessary. We are asking for your fullest co-operation. You may be assured all information will be treated as strictly confidential and with your permission, will be made available only to those in charge of our industrial health, and safety program, the examining doctors, and, at your request, your family physician.

J. JOHNSON, *President.*

Full name ..... Address .....

Department employed in ..... Kind of Work .....

Date of Birth ..... Month ..... Day ..... Year ..... Age .....

Place of Birth ..... City ..... State

Single ..... Married ..... Widowed ..... Divorced ..... Separated .....

FAMILY RECORD

Wife's Health: Good ..... Average ..... Fair ..... Not Good .....

Number of Children .....

| | LIVING | | DECEASED | | |
|---|---|---|---|---|---|
| | Age | Health | Age | Date of Death | Cause of Death |
| Father | | | | | |
| Mother | | | | | |
| Brothers | | | | | |
| Sisters | | | | | |

Has either of your parents, or any of your brothers, sisters, or wife, been afflicted with:

| | Father | Mother | Brothers | Sisters | Wife |
|---|---|---|---|---|---|
| Consumption | | | | | |
| Cancer | | | | | |
| Insanity | | | | | |
| Epilepsy | | | | | |
| Diabetes | | | | | |

What is your weight in ordinary clothes ..... What is your height in shoes .....

To what extent, during the past year has your weight increased ..... or diminished .....

From what cause ..... If heavy or light in weight, state whether this is a family or an individual characteristic .....

Sleep: Good ..... Average ..... Poor ..... Night Sweats ..... Yes ..... No .....

Distress before or after meals Yes ..... No ..... Bowels: Regular ..... Sluggish .....

Do you use Cathartics ..... Regularly ..... Seldom .....

HAVE YOU HAD ANY OF THE FOLLOWING

Malaria ..... Typhoid ..... Or Other Fevers ..... Any Heart Trouble ..... Palpitation .....

Pain Over Heart ..... High Blood Pressure ..... Low Blood Pressure ..... Any disease of the Arteries ..... Enlarged Veins ..... Varicose Ulcers ..... Frequent Colds ..... Cause as you know it ..... Frequent Cough ..... Hoarseness .....

Raising of Blood ..... Asthma ..... Shortness of Breath ..... Tonsilitis ..... Hay Fever .....

Pleurisy ..... Bronchitis ..... Pneumonia ..... Tuberculosis ..... Any Lung Trouble .....

Infantile Paralysis ..... Gastritis ..... Ulcer of the Stomach ..... Indigestion .....

Appendicitis ..... Frequent Diarrhea ..... Dysentery ..... Other Bowel Trouble .....

Jaundice ..... Gall Bladder Trouble ..... Gallstones ..... Gall Bladder Removed ..... Liver Trouble ..... Piles ..... Fistula ..... Any Disease of the Rectum ..... Diphtheria .....

Smallpox ..... Headaches: ..... Severe ..... Protracted ..... Frequent ..... Dizziness .....

Fainting Spells ..... Unconsciousness ..... Epilepsy ..... Convulsions of Any Kind .....

Neuritis ..... Neuralgia ..... Rheumatic Fever ..... Rheumatism: Sciatic ..... Inflammatory .....

Articular ..... Apoplexy ..... Paralysis ..... Any Nervous Trouble ..... Sugar in Your

SNAP-ON TOOLS CORPORATION

Date .....

INDUSTRIAL HEALTH AND SAFETY DEPARTMENT

Dr. ..... Employee .....

With the above named employee's permission we are sending you a medical report of his physical examination made on ..... He has indicated his desire for further consultation and medical advice and will, undoubtedly, within a few days report to your office for this purpose.

Will you kindly notify us on Form 1481 immediately following his visit.

By .....

Urine..... Albumin..... Casts.....

Urination: Painful..... Frequent..... Difficult..... How Often Do You Urinate at Night.....

Gravel..... Bright's Disease..... Swelling of the Feet..... Legs..... Diabetes.....

Ever taken Insulin..... If yes, give particulars.....

Any Disease of the Testicles..... Prostate Gland.....

Syphilis..... Gonorrhea..... Stricture..... Gout..... Goitre.....

Impairment of Eyesight..... Wear Glasses..... Bifocals..... Date Examined.....

By Whom..... Where Located..... Impairment of

Hearing..... Roaring or Ringing of Ears..... Discharge from the Ear..... Nose: Bleeding.....

Discharge..... Sinus Trouble..... Feet: Fallen Arches..... Corns..... Bunions.....

Cancer..... Tumor..... Ulcers of any Kind..... Skin Disease..... Eczema.....

Carbuncles..... Boils..... Chronic Discharges of any Kind..... Teeth: Any Devitalized Teeth.....

Number..... Pyorrhea..... Have your Teeth ever been X-Rayed..... Dentures..... Have you

ever been X-Rayed for any Other Purpose..... If So, What.....

Sunstroke..... Heat Prostration..... Have you undergone any Surgical Operation..... For What

Have you ever had difficulty with your Bones..... Joints..... Spinal Curvature..... Any Sacro-iliac

trouble..... Any Bodily Malformation..... Are you Ruptured..... Do you wear a Truss Constantly

except when in bed..... Have you had since childhood any Chronic or Constitutional Disease.....

Or Severe Injury not fully set forth above.....

Have you ever been confined in any Hospital.....

If Yes, state why and when.....

Sanitarium..... If yes, state why and when.....

Do you use Alcoholic Beverages to Excess..... Have you ever indulged in the Use of Opium.....

Morphine..... Cocaine..... Or any other Narcotic..... Have you ever take any Treatment for

Alcohol..... Or Drug Habit..... If Yes, State When and Where.....

To what extent do you use Tobacco..... Have you been under any Restriction of Diet for

any cause.....

If yes, give particulars.....

Have you Consulted, been Examined, or Treated by, any Physician or Practitioner within the

last 5 years?

| Yes or No | Name and Address | Date | Reason |
|---|---|---|---|
| | | | |

Ever Examined or Rejected by any Fraternal Order, Lodge, Society, or Insurance Company?

When Name

Any Other Information You Can Add That Will Be Helpful.

This authorizes you to file and use this history information in the Snap-On Tools Corp. Industrial Health and Accident Prevention Department, and authorizes you to make the information available to the examining doctors, and at my request when necessary to my family physician.

Date..... Signature..... Witness.....

(1481)

REPORT TO
SNAP-ON TOOLS CORPORATION
Industrial Health and Safety Department

Name Address

consulted me on Date following the physical examination made under your Industrial Health and Safety Program.

Remarks and Recommendations:

You will be kept informed by later reports, and will be notified when the work is completed.

Physician M.D. Address Date

One of these forms notified the family physician that the employee had requested the information to be forwarded. The other requested the physician to report back to us. (See Form below—underneath the second part of the History Form.) This meant a great deal to our program. Without it, our follow-up system would be greatly handicapped. The doctors have cooperated wonderfully on this part.

If, owing to accident or sickness occurring at the shop, it is necessary to send an employee to the doctor, a pass is issued, and with it we send a form for the doctor to return to us. (See the Form at the top of the following page.)

This information enables us to make proper entry on hospital records and also gives us a check on approximate lost time. If an employee is off beyond the time indicated, we can check for willful absenteeism.

Our histories and examination blanks are filed in alphabetical order.

Colored tabs are used to indicate different ailments. If red were picked as the color for heart ailments, for example, then all who had any heart disorders would have red tabs on their folders. In this way, we can check various disorders rapidly and accurately. It is a definite aid to the doctors on follow-up examinations. The employee's absentee and first aid records are also kept on file with this folder. This, we find, is a definite aid to the safety and personnel departments. We are able to spot accident repeaters quickly and accurately.

Five hundred persons were checked physically, and there were 287 findings. Two hundred and seven persons were involved in these findings. The largest number, of course, were those whose teeth needed attention. Most of these employees are now under the care of their physicians or dentists. The results in our shop are rather amazing. Absenteeism dropped to a marked degree, and accidents have declined to the extent that we have had five months in this year without a lost time accident. We have a frequency rate of 16 as against 45 for last year. We explain this as a psychological effect of less worry due to physical health. So the relationship of health to safety is indeed close. Preventive medicine must not be passed lightly as a contributing factor to cutting lost time.

Many times little ailments that are caught early by the visiting

REPORT TO
SNAP-ON TOOLS CORPORATION
Industrial Health and Safety Department

Employee's Name _____ Address _____

Has been examined and treated on _____ Date

Findings _____

Nature and extent of injury _____

Approximate length of time patient will be absent _____

If no lost time, please state same _____

Signed _____ M.D.
Physician

physician would have resulted in days of lost time.

So far, nothing has been said about the eyes or eye protection. It so happened that we had a complete eye protection before our health program was started. The employees are examined by recognized eye doctors, and corrective goggles are furnished. A corrective goggle program is expensive, or at least it appears to be. The original costs frighten many away from such a program. The final analysis shows up a different situation, however. We found that 20% of our employees had defective eyesight uncorrected. When correction had been made the quality of their work increased immediately, inspection costs dropped, and more finished material was going into the warehouse rather than into the scrap pile.

It is our very firm conviction that, even if the safety factor is not considered, such a program pays.

The formation of the Committee on Industrial Health by the Kenosha County Medical Society was one of the best things that could have happened. Any firm working on an open panel can be greatly benefited by such an action. All the physicians get a chance to visit the plants and have a greater understanding of industrial work. They become much more efficient at handling industrial cases. The County Medical Society takes the responsibility for the rotation, and eventually all the doctors are going to become industrially minded. The patient derives the greatest benefit from this, but indirectly the manufacturer benefits also. We believe the time will come when all plants that do not have full-time physicians will be forced to work on the open panel. When that time comes, they can best be served by a set-up such as we are working under.

The results obtained from our health program have been gratifying. The decrease in lost time, which adds up to greater output, will in a large measure cover the cost of examinations. The Snap-on Tools Corporation has proved to itself at least that small industry can have a good health program. The good will and labor-management relationship is worth a lot more than can be measured in a monetary manner. We are thankful for having provided the means of proper placement for the returning serviceman. We are reasonably assured that we are going to be able to reap the benefits of the productive labors of our healthy employees for years to come. Snap-on Tools Corporation is prepared to meet its obligation of the future.

## Complete Dislocation of the Knee

*—Unaccompanied by Fracture—*

WILLIS W. LASHER,
*Colonel, M.C.*

COMPLETE dislocations of the knee, unaccompanied by fracture, are sufficiently rare to deserve reporting. A great deal of uncertainty exists concerning the ultimate prognosis. The marked lateral angulation and rotation accompanying such dislocations, are frequently accompanied by circulatory changes, emphasizing the urgent necessity of the earliest possible reduction.

CASE REPORT: On October 19, 1943, Cadet L. L. S., 23 years of age, dislocated his left knee while playing football. Several players were in a pile, and the exact nature of the violence could not be definitely determined. Fifteen minutes following the injury, when the patient arrived at the hospital, the entire leg and foot were completely blanched. An immediate reduction, under general anesthesia, was made on the x-ray table.

Firm traction was exerted on the leg while, at the same time, the patella was forced upward and direct pressure made to overcome the lateral displacement. The reduction was accompanied by a loud thud, and almost immediately the circulation in the toes returned to normal.

A circular plaster cast was applied with the joint in

Fig. 1.
Before Reduction

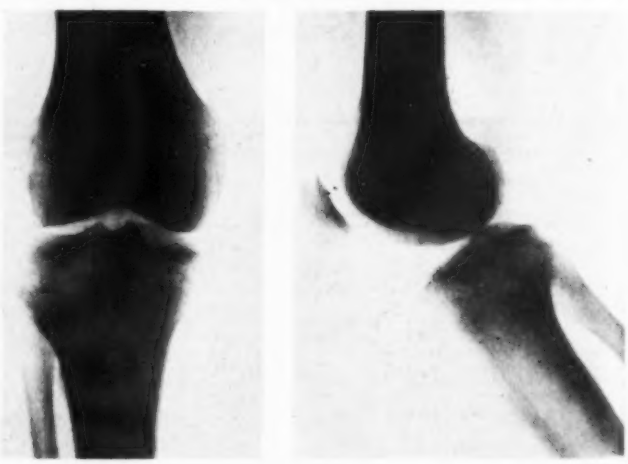


Fig. 2.
Following Reduction

extension. This cast was cut throughout its entire length, and the following day there was considerable swelling. The joint was acutely painful for seven days. On the fourteenth day a portion of the cast was removed from the foot and the patient was permitted to use crutches. On the twenty-fifth day the cast was removed and the patient was fitted with a walking caliper splint which he continued to wear for two months following the date of injury. On the twenty-seventh day physiotherapy treatments, consisting of whirlpool bath, massage, and carefully supervised exercise were begun, and continued for a period of three months after the date of injury. Two months after the injury, when the brace was removed, an elastic bandage was substituted and the patient wore this until the end of the fourth month.

Three months following the injury a considerable amount of atrophy in the muscles of the thigh was noted. However, the carefully supervised exercises, which the patient was most cooperative in performing, gradually restored his highly developed thigh to its original size so that, on May 15, when he appeared before a Medical Examining Board for commission in the Regular Army, there was no remaining evidence of the original injury, no limitation in motion, no deformity, and no abnormal lateral or anterior-posterior mobility.

IT SEEMS quite fair to conclude that the crucial ligaments, which are scarcely more than half-an-inch long must have been torn, since the displacement of the bones must have been at least this great. It is difficult to imagine that these torn ligaments repaired themselves. We therefore assume that the extreme muscular development of the thigh and the ligamentous structures about the knee were, in themselves, sufficient to prevent or check any abnormal anterior-posterior motion; and that the thigh muscles assumed part of the function of the crucial ligaments.

The cadet is now an aviation officer, and reports that he is engaging in all forms of athletic sports, emphasizing the point that he is playing "touch football." Since there has been no recurrence or symptoms for several months, it seems logical to conclude that the case can be reported as a complete recovery. Early operation in cases of this nature seem contra-indicated.

---

## Effects of Tetryl on the Lungs

HAROLD S. HATCH, M.D.,
*Morristown, New Jersey,*
*and*
MAJOR E. W. PROBST,
*Medical Corps, Army of the United States*

TETRYL, a complex chemical compound, is an explosive used principally as a detonator and a booster. Because large numbers of workers are engaged in the manufacture and loading of this material, its possible effects on them are of much importance.

Considerable literature has appeared on this subject. Investigators are agreed that tetryl is a decided local irritant, often causing a dermatitis which appears usually on the face. People vary greatly in their susceptibility to this. Nasal irritation and epistaxis occur in many of those exposed.

Whether the effects of tetryl are limited to those of local irritation, or whether it may cause systemic effects, is open to controversy. The consensus appears to be that systemic effects do not occur. Certainly this is in accord with our experience as previously reported.[1] Jones,[2] with his wide experience in this field also is in agreement on this point, as is also Silver.[3] Witkowski,[4] Noro,[5] Brabham[6] and others[7] report the occurrence of systemic effects, none of which was severe, however.

We have seen no mention in the literature of one very important factor in the problem of evaluating the effects of tetryl on the body; this is the psychological influence of the marked yellowish discoloration of the nails, skin and hair. In our experience, many workers are profoundly impressed by this often dramatic discoloration which always elicits comments by their associates. They often tend to become introspective, and magnify minor complaints which they invariably attribute to tetryl, and sometimes imagine all sorts of vague symptoms. All too frequently, the family doctor, unfamiliar with the action of tetryl, is also impressed, and blames the compound for ill effects not warranted by facts.

Because we have had a few cases of alleged lung damage to tetryl, we have carried out some investigations on this subject, and wish to report our results. In the available literature we have been unable to find any report of similar studies.

All workers in tetryl here are given chest x-rays when employed, and those showing lung fibrosis or other lung abnormalities are excluded from employment in tetryl. Periodically thereafter, these workers have their chest x-rays repeated, and these films are carefully compared with the original ones. At this plant 4000 people are in contact with tetryl. Thus far we have found no x-ray evidence of lung damage in any one of them.

We have also reviewed the records of these workers as regards absenteeism and dispensary visits, comparing their experience with that of others not exposed to tetryl. We find that these workers actually have better records as regards absenteeism and respiratory infections than do employees in other departments. This is attributed to the fact that our tetryl workers are a carefully selected group, among whom one would expect least illness.

Because of the well known irritating effects of tetryl as shown by the skin eruptions and nose and throat irritations so often seen, there must be a good explanation for the absence of symptoms in the lower respiratory tract.

Impinger dust counts have been made in all buildings where tetryl is processed, and in many cases several counts were made in various locations in the same buildings. We will be glad to make these data available to authorized medical officers of plants handling this explosive. We found that the tetryl content of the air varied greatly in various locations, depending on the operations being carried on. We also determined that the size of the particles in the air was 150 microns or more, because smaller particles were excluded by screening.

We believe that the size of the tetryl crystals is of tremendous importance in explaining the lack of lung damage in these workers. Lanza,[8] in discussing the relationship between the size of silica particles and the development of silicosis, states that dust particles 10 microns or more in size settle out of the air very quickly, and are too large to get into the smaller subdivisions of the bronchial tree. Many of these particles, too, are prevented from reaching the smaller bronchioles by the defensive mechanisms of the upper and lower air passages. Another important consideration is the fact that tetryl is practically insoluble in the body fluids.

### Summary

IN A LARGE group of workers in tetryl we have found no evidence of lung damage in any case. Less absenteeism and fewer respiratory infections were found among these workers than prevailed in other depart-

ments. We believe that the large size of the tetryl particles causes them to settle quickly from the air. Those that are inspired are prevented from reaching the smaller bronchioles by the defensive mechanisms of the respiratory tract and by their large size.

### References


1. Probst, E. W., Mund, M. H.: Effects of Tetryl. *J.A.M.A.*, 126, October 14, 1944.
2. Jones, F. M., Montreal, Canada: Personal Communication.
3. Silver, L.: The Treatment and Prevention of Industrial Diseases in Filling Factories. *J. Roy. Army M. Corps*, 1938, 71.
4. Witkowski, L. J. Fisher, C. N. Murdock, H. D.: Industrial Illness Due to Tetryl. *J.A.M.A.*, 119, August 22, 1942.
5. Noro, L.: Investigations on Poisoning by Trotyl, Tetryl and Fulminate Mercury Among Workers in the Munitions Factories of Finland. *Acta Med. Scandinav.*, 1941. Supplement 120.
6. Brabham, V. W.: Tetryl Illness in Munitions Plants. *J. South Carolina M.S.*, April, 1943.
7. Queries and Minor Notes: Tetryl and Lead Azide Poisoning. *J.A.M.A.*, 119, June 13, 1942.
8. Lanza, A. J.: Silicosis and Asbestosis, New York, Oxford University Press, 1938.


## Should the Worker with Silicosis Be Informed of His X-Ray Findings


L. E. HAMLIN, M.D., F.A.C.S.,
*Medical Director,*
*American Brake Shoe Company*


THE time-honored proverb "Honesty is the best policy" is as true today as it has always been, but unfortunately in some instances its practical application still leaves much to be desired. Progress brought about by modern industrial medicine and hygiene and the growing cooperation between management, labor, and public health departments in this field augur well for better mutual understanding in the future.

In past years, management, not without reason, has been reluctant to face realities concerning occupational disease. Vicious litigation and unfair administration of existing laws in some localities produced an understandable hysteria with regard to these conditions out of all proportion to the actual facts. Inadequate knowledge of fibrosis and the development of the ubiquitous silicosis rackets a few years ago added much to the concern of both workers and employers who responded each in his own tongue and to the discomfiture of all. The employer proceeded to divest himself of those workers who were potential liabilities. To screen out anticipated claims of disability he entered the field of mass radiography and sought to escape responsibility by the wholesale discharge of men, many of whom were old and loyal employees. The worker, abetted by unscrupulous legal advice, demanded his full pound of flesh for disability, actual or not, caused by silicosis.

The effects of this regrettable situation are still apparent today. Workers who have not forgotten that they lost their jobs through unreasonable attitudes of management are skeptical of plant health and x-ray surveys which executives now desire to institute. Recalling former unpleasant experiences, some employers are still apprehensive about their men being informed of results of their roentgenograms, because of possible claims for disability.

In the light of experience neither assumption seems warranted. Generally speaking, the employer has nothing to lose and everything to gain by having a competent physician discuss x-ray findings in a frank and honest manner with the party concerned. The word *competent* is emphasized because the success of the whole effort will be determined by the diplomacy of the doctor and the extent of his understanding of industrial ailments. He must know his subject and be able to explain findings to employees in an intelligible manner. Today too many physicians have not familiarized themselves with the more recent aspects of occupational disease. They have failed to recognize their responsibility to workers and management, and in many cases have caused unnecessary hardship to each by unconsidered judgment and snap diagnosis based largely on a history of exposure and incorrect interpretation of roentgenograms.

Some doctors, even those engaged entirely in industrial practice, have not taken the trouble to make trips through the plants they service in order to obtain first hand knowledge of actual working conditions and the physical requirements essential to efficient performance of the diverse operations. They do not hesitate, however, to advise the employee against continuing work in his present position because of an alleged exposure. They are unaware that a hygiene-conscious management may have made every effort to eliminate occupational risks through plant surveys and improved ventilation. One recognizes that the physician usually offers such advice with the best intentions in the world but it may also be a temptation for him to follow the line of least resistance and tell his patient something he would perhaps expect to hear and which would possibly offer a reasonable though not necessarily true explanation of his symptoms.

Frequently the doctor does not stop to consider that the employee may have spent his whole life at the job in question. Aside from the fact that he has become very proficient at it, the man knows no other occupation. Transfer to other work not only serves to discourage him but also very often disturbs his earning capacity. The plant superintendent loses the services of a valuable worker, and production suffers at a time when it is urgently needed. Such action upsets the mental outlook of the employee, stirs up unjust claims for compensation, and may transform a satisfied workman into a chronic invalid.

Consider the case of a grinder in a certain plant. His 33 years of experience in this location are an indication of loyalty and satisfaction with his job. A routine x-ray of his chest suggested a very fine nodulation which was interpreted as a mild, non-disabling siderosis or iron pigmentation of the lungs. Air samples in the area in which he worked showed dust concentrations to be well within recognized safe limits. Serial x-rays from the year 1933 indicated no change in the condition observed in his chest. The employee was interviewed personally and advised of the findings. He was entirely satisfied and unconcerned. Some weeks later he contracted a cold and consulted his personal physician, a very able practitioner. The doctor viewed the man's recent chest x-ray and informed him that he had a second degree silicosis. He advised him, in good faith, to discontinue working. The employee returned to the plant very much perturbed. The plant superintendent could ill-afford to lose an experienced grinder and feared that some of his other men might refuse to work in the plant after hearing of the case. Owing to the shortage of capable men and the demand for increased production, the situation could easily become serious. Further discussion failed to convince the grinder that his symptoms were not due to dust in his lungs. He was later allowed to return to his work by his doctor but was still dissatisfied and worried. Finally, he was tendered a physical examination by well recognized authorities at a university hospital. He agreed to abide by their conclusions. The company assumed the expense. After very thorough clinical tests and further x-rays, the original diagnosis of mild non-disabling siderosis was substantiated and the clinical symptoms ascribed to

early cardiovascular disease. This was fully explained to the employee at a later interview. He seemed to be reassured but did not wish to go back to grinding. In view of his loyal service and cooperative attitude, other employment was found for him but at a reduced rate of pay. Inasmuch as he was a single man and had saved his earnings, he was content to take the work offered.

The upshot of the whole episode was that the services of a valuable man were lost to a plant engaged in national defense at a very critical time, production was interfered with, an experienced grinder suffered financial loss and acquired additional unnecessary worry, the cost to the company in time, money and inconvenience was substantial —all this because of well-meaning but unconsidered medical care.

Dr. Hamlin explains the results of an examination

EXPERIENCE in discussing x-ray findings and occupational fibrosis in some 196 cases in the iron mining district and foundry industry during the past 12 years has convinced me that such a policy can be carried out with mutual satisfaction to management and its employees. In one mining district a recognized hazard caused a large percentage of workers to be affected with silicosis in all its various stages. In addition, the incidence of tuberculosis in the community was very high. The mining company, while aware of its responsibility and keenly desirous of eliminating the danger, was apprehensive about informing men of results of chest x-ray surveys. Their fear of litigation was justifiable to a large extent but not entirely so. For several years periodic examinations were made but the employees were not told of the outcome. As a consequence they became disinterested and uncooperative, and many refused to submit to further tests except under pressure. At the conclusion of the next survey each employee was contacted and the results of the examination were explained in language he could understand. The effect was dramatic. Employees expressed their appreciation and showed greater interest in protecting themselves. Many who had been afraid that their lungs were already affected exhibited evident relief on being told that the films were negative. Others whose roentgenograms showed evidence of disease became more cooperative and less apprehensive. A very decided lift in morale was apparent and not a single case of litigation resulted. Management was definitely relieved of a moral responsibility and the men realized that the company for which they worked was sincere in its effort to care for their health. In several instances those whose attitudes the company feared most proved to be exceptionally cooperative.

Employees working in cloudy atmospheres are not unmindful of the potential risks they face, but many, through long familiarity with such environments, show no undue anxiety when told that there is evidence of dust accumulation in their lungs. It is recognized as something to be expected. They worry, however, about the presence of infection, and manifest relief on being told that they do not have tuberculosis. Once a man has had his findings so explained, he is very willing to submit to subsequent x-ray and physical examinations. He recognizes their value and appreciates the fact that management has made them available.

THE AMERICAN BRAKE SHOE COMPANY
Medical Department
2501 Blue Island Avenue
Chicago 8, Illinois

Study No._____ Date_____

Mr._____

Address_____

☐ X-Ray Examination}
☐ Physical Examination} extended to you by the

_____Division of the American Brake Shoe Company

on (Date)_____indicates the following_____

It is recommended that you
☐ See your Dentist.
☐ Consult your family physician for advice and treatment.
☐ Have your eyes examined and fitted with glasses by a reputable eye doctor.
☐ Report for a re-check of your chest in_____months.

Signed_____Medical Director

(Note: Pay attention only to items checked.)

**Confidential notice to employee indicating results of examination. These forms are printed in duplicating sets using different colors. The original is light green and the duplicate which is filed with the employee's medical record is yellow. The contrast in color makes for more rapid recognition of the various forms in the employee's folder**

If an employee is not informed of the results of examinations he frequently suspects something is wrong and seeks advice from his personal physician. An x-ray is usually made and he is told that he has silicosis. He immediately becomes resentful and returns to his place of employment to find out why this information has been kept from him, and wants to know what the company proposes to do about it. Management has no logical answer and is faced with an embarrassing situation which may involve legal proceedings and the loss of a good workman.

On the other hand, if the employee has already been made aware of the findings disclosed by the plant health survey he is usually satisfied and has no legitimate com-

plaint against the management as far as being informed is concerned.

THE American Brake Shoe Company firmly believes in reporting results of physical examinations and x-rays to its employees, and during the past four years the medical department has evolved the following procedure. After completion of a plant survey, those participating are informed of findings by means of printed slips sent out from the medical department. These notices are confidential and are distributed in sealed envelopes. The recipients are advised to seek medical advice for correction of defects. A duplicate is kept in the individual's record in the medical department. Significant occupational fibrosis is not recorded on the form, as the medical director will arrange for a personal interview with the affected worker to interpret the results to him. This arrangement has a definite beneficial psychological effect. Most people are greatly interested in seeing x-rays, particularly their own, but many have never had the opportunity of doing so. The doctor can easily explain the various shadows in the roentgenogram so that even the unintelligent are able to grasp the idea. If necessary, a normal chest film may be demonstrated for comparison. One has only to interview a few workers and display x-rays to sense the keen interest such a procedure evokes. Recently one of our old employees ventured the information that he was very glad to see his film because he had just been on the point of going to the hospital to have an x-ray taken, on his own volition, "just to see what it looked like."

In discussing silicosis with an employee, the man is reminded that he has worked in a dusty occupation for a considerable number of years and it is not surprising that his x-ray shows some evidence of reaction. He usually agrees to this and readily admits that it is to be expected. The effects of different dusts on the lungs are explained, and he is assured that his particular condition is no immediate cause for worry. His serial films are shown to demonstrate that the condition has not changed over the years, and he is told that there is no reason why he cannot continue his regular work. Steps taken to control the dust and make his working place safe are outlined to him, and he is asked to submit to subsequent x-rays as a matter of routine check-up. He is also informed that if his condition shows any progression he will be immediately consulted about it. The word "silicosis" is not used unless the man brings it into the conversation himself. Some men become unduly apprehensive at the mention of the word, whereas if told that their x-rays show evidence of accumulation of dust they are not nearly as concerned. This is in no way an attempt to cover up the true facts, but is simply a matter of good psychology. Most workmen are familiar with the term but do not have any real knowledge of the various stages of the condition or the degree of disability it may produce. If told they have "silicosis" their first reaction is one of shock, and subsequent attempts to correct the impression will be difficult. The same response might be expected from an apparently healthy person who is told simply that he has tuberculosis even though the shadow observed in the x-ray represents a healed fibrotic lesion of no clinical significance.

When the x-ray discloses complicated silicosis the disposition of the case is more of a problem. An effort is made to evaluate the degree of disability as accurately as possible. All the factors concerned, such as the man's age, length of service, symptoms, state of present health, ability to perform the job, mental reaction, and roentgenographic findings are given due consideration. The exposure to dangerous-sized particles of hazardous dust is re-checked by representative air samples taken at the working place. The actual conditions, general and local, are studied to determine if continued employment will offer further risk to the workman in the event that his physical condition will permit him to remain on the job, under observation. If his infection appears to be indeterminate or suggestive of activity, he is referred to a recognized chest clinic or sanatorium for further examination and study. In the event that the disease is found to be quiescent the employee is allowed to continue working but under strict observation and safe exposure. He is re-x-rayed at intervals of from three to six months and notified of the results. When there is evidence of progression of his infection, either by x-rays or clinical examination, he is advised to seek sanatorium care. If it is decided that he has a legitimate claim for compensation, the case is placed before the industrial commission for settlement. Financial aid is extended through plant welfare funds and company donations. Effort is made to secure the best medical care and effect rehabilitation.

Experience has proved the value of this policy. In the great majority of cases it has resulted in better understanding and respect for the company. In any industry some individuals will always be unreasonable, but they are in the minority. In such instances the men are informed that it is their prerogative to take their cases before the industrial commission if they are not satisfied. At the same time they are given to understand that their claims will be strongly contested if they do not have definite disability. The insurance carrier is not allowed to settle cases for their nuisance value and no attempt is made to evade responsibility for just demands.

The time has come when the human factor in industry must be fully recognized. Many organizations have long since realized this and in spite of numerous obstacles have worked out admirable policies and commendable industrial relationships with their employees. Some have gone to the extreme and adopted paternal attitudes that are neither appreciated nor desirable. Others, with traditional aloofness, still ignore the handwriting on the wall and dismiss workers' problems as something for the insurance carrier to handle. Somewhere along the middle road lies a path of mutual cooperation between labor and management, and one of the direct avenues of approach can well be via the plant health survey, sincerely conducted and honestly administered.

---

## Health Education in Industry

*—Effective Persuasion toward Better Health Behavior—*

FRANK M. GATTO, Ph.D., M.D.,
*Director of Health Conservation,*
*Westinghouse Electric & Manufacturing Company,*
*Pittsburgh*

THE worker's health in its relation to his vocational life is a topic of widespread interest, repeated study, and universal discussion. The awareness of a relationship between environmental substances and forces and the physical status of the organism subject to them may well be considered as antedating any available documentary acknowledgment of such a relationship. Certainly, Ramazzini himself appeared late

The text of DR. GATTO'S Lecture at the Third Post-graduate Course in Industrial Medicine given by Long Island College of Medicine, October 16-November 3, 1944.

on the scene, if the chronology of events is considered. If to this eminent physician we must attribute the paternity of industrial medicine, we must also bear in mind that whatever has a father has grandparents and more remote antecedents whose silhouettes ultimately merge with the ill-defined shadows of long-forgotten centuries. Here, however, we shall not concern ourselves with the historical evolution of thought on industrial health, for that is, obviously, not our task. Our subject is stated as "Health Education in Industry."

The concept of the relationship of health and industry has undergone, in the past several years, both a qualitative and a quantitative change. It has emerged from the confines of mechanical hazards to the integrity of human life and limb, to include any functional or organic impairment which directly or indirectly affects job safety and efficiency.

Another cataclysmic event has occurred to earlier thinking on industrial health. By the very fact that the horizon of industrial health enlarged to contain more than the narrow idea of illness and injury produced by industrial machines, processes, and substances—by this very fact the center of emphasis shifted from machines and processes and substances to the worker himself. Not that the former are forgotten! Their importance is conceded and their demands are met by the ever increasing complexity of safeguards which daily multiply in the field of industrial activity. But the larger view that we have mentioned has forced us to the inevitable discovery that the preponderance of health problems of the worker in industry are not industrial at all.

No effort to bisect the human organism into separate industrial and non-industrial entities has ever succeeded. Man, the industrial worker, is only a phase of the totality of attributes which identify the human entity as a whole. Biologically, a man may suffer the countless vicissitudes of health not only when he manipulates a mechanical device but also when he engages in any of the varied activities of his daily life. Moreover, he carries to each situation the organic and functional modifications suffered in another.

Consequently, the industrial worker may suffer from and carry to his job the countless disabilities which may afflict us all, and, as a result, industrial health loses much of its pretensions to an isolated existence and becomes, primarily, health.

THIS carries us to the matter of health education. The term implies that the preservation of health cannot be entrusted entirely to external safeguards. There are numerous factors subject to individual determination which lead to well being or to injury or disease. It becomes, therefore, of the highest importance that the individual be equipped with the information, the skills, the habits, and the attitudes which promote the acquisition and preservation of health and the avoidance of disease or injury. Such equipment pre-supposes adequate education.

In the ensuing discussion, I shall limit myself to this subject primarily. I shall do so for three reasons. In the first place, I believe that the recognition of basic educational principles is indispensable to the development of promising programs of health education. Secondly, I believe that such discussions are rarely attempted before medical audiences, so that I shall be less likely to be repetitious. In the third place, my present audience is too well versed in the purely industrial or the purely medical aspects of this question to warrant a review of these phases here. I shall, therefore, speak not as a physician primarily but as a teacher. When we convene as physicians we generally speak only of health, or of the many and multiform departures from it. We shall now speak of education, and when we shall have considered that topic we shall draw whatever inferences may be pertinent to the task we shall ever increasingly assume as physicians who are, at the same time, teachers of health.

TO ENTER into a detailed treatise on education is obviously neither possible nor desirable in this paper. Certain basic concepts must, however, be dealt with simply to clarify our thinking and to improve the effectiveness of our efforts in health education. First of all, an analysis of the term education may conjure up a wealth of meanings, but paramount among them is the clear implication that wherever true education occurs there is some modification in the learner's methods of reaction.

The essence of learning is the acquisition of some new form of behavior—either in our externally perceptible or motor behavior or in our thinking. It is obvious that if the process termed educative does not result in such change, learning has not taken place and the educational effort has been merely an abortive effort to teach. Thought and act remain the same—no new powers are acquired, no education has taken place.

In this connection it must be stressed that the mere memorization of information is, in itself, not education in the true sense. One may well commit information to memory and remain impotent to use the data in a dynamic act of brain or brawn. Nowhere is this fact of greater importance than in health education, for here, to a degree excelled in no other form of education, the final test is the dynamic thought and act which culminates in healthier and happier living.

This should be remembered whenever we speak glibly of health education in industry—and proudly display, as proof of our effective educational effort, a casual article in the plant newspaper. I should object to the charge of underestimating such an offering; however, I must protest that only an unhappy lack of understanding and of humility would permit the claim that the dissemination of such material constitutes a program of health education.

Neither such literature, nor the scattered lectures to ill-assorted audiences rendered by speakers unaware of the interests, needs, and capacities of these audiences can be termed health education. Not even the more spectacular procedures involving the use of films or other visual aids, can in themselves be said to constitute health education. All of these are devices and as such are highly useful. But only their skillful and effective use—their proper adjustment to the background, needs, abilities and interests of the worker will lead to the change of health behavior which alone can be accepted as evidence that health education has, in fact, taken place.

NEXT, I should like to mention an old pedagogical principle—the doctrine of apperception—an understanding of which is one of the most critical needs of anyone interested in education in industry. This principle is merely that anything new is interpreted on the basis of past experience. In a practical sense this implies that whatever information may be required to understand something we attempt to teach should be imparted before the new lesson is presented. The inevitable inference for health education in industry is that any given material to be presented for the education of the industrial worker should (a) either be introduced after insuring an understanding of its basic concepts, or (b) should be self-explanatory

or so presented that it defines and clarifies any new concept within the limits of the presentations themselves. In other words, unless the educational program includes presentations of graded difficulty each one preparatory to the one which follows, each educative effort in itself must possess an organic unity with all of its ideas clearly developed within the compass of the presentation itself. Each new term or idea must be accompanied by an appropriate interpretation or illustration. Nothing must be taken for granted in the learner's background. The principle of apperception must be satisfied. If this appears to be easy of accomplishment my only counsel would be that those possessing this happy confidence be given every opportunity to show their skill. The only proviso I urge is that their efforts be judged by those trained in the technique and procedures of teaching. After all, educational programs should be evaluated with reference to educational principles and results; other criteria are irrelevant and of no discernible value.

At this juncture I should like to mention three additional pedagogical principles of far reaching importance. They are usually referred to as the laws of readiness, exercise and effect. Much has been written concerning them, and their full interpretation would require a degree of detail beyond the scope of this paper. We shall merely allude to them briefly.

The law of readiness touches upon such factors as interest, motivation, or mental attitude. If the learner because of these and other related impulsions toward a given activity indulges in that activity he does so with resultant satisfaction to himself. If, however, he is forced into a given course of action in the absence of "readiness" the end result is annoyance. Practically, to the would-be educator in industry this means simply that the act of learning requires an eager self-propulsion on the part of the learner. It cannot be effectively imposed by external forces. The essential strategy is the intellectual and emotional preparation of the learner so that the learning function derives its power from an inner and undeniable drive rather than from futile exhortation from without. The creation of this readiness or mental set is a complicated affair depending upon a given situation. It is difficult to illustrate it in terms of general applicability. Probably a fair example is the skillful preparation of mass thinking by the ingenious propagandist who cleverly produces a series of impressions which in their cumulative effect lead to a course of action or the acceptance of an idea already determined upon by the propagandist. This interpretation is in no sense an evaluation of propaganda; it is merely an attempt at illustration. Briefly, we may summarize by saying that if the educational program in industry is to be truly such we must adequately prepare the learner to accept the program and to participate with enthusiasm in it.

Next, we may consider the law of exercise. This principle is so generally recognized as to require no elucidation. It simply states that, within limits, the repetition of a given response to a given situation so strengthens the bond between them that the response becomes more and more certain with repetition. This is the fundamental principle underlying the use of drill and other repetitive measures in teaching. The inference to the educator in industry is that an item of the health curriculum should not be considered as having been taught—that is, learned by the worker—as the result of a single presentation. Of course, it is conceivable that certain curricular material may be effectively learned on a single exposure of the learner to it; however, this is largely in the nature of assumption, and the burden of proof is on the assumer.

IT MAY be stated as a generalization that every important health concept should be brought to the attention of the worker repeatedly—possibly in different form and by way of different approaches. In other words, to issue a poster on the subject of the common cold, however laudable a venture, cannot be considered as assuring knowledge of the topic on the part of the worker whom the educator hopes to reach with his message. Even less does it assure the carrying out of proper prophylactic measures. The effort must be repeated—possibly in terms of more extensive literature, visual aids, lectures and discussions and, perhaps, even individual conferences. It is a strange fact that the essential character of repetition in learning is not only frequently overlooked, but planners of so-called educational programs often consciously seek to avoid the repetition of an important subject to escape the imputation of unimaginativeness. The painful quest for a variety of topics so great as to preclude any chance of repetition is one of the regrettable errors of the educational strategist who is not an educator at all.

The law of effect is another principle of crucial significance. This law states that, in learning, those responses are best acquired which give the learner satisfaction. If the skill that is gained or the information which is acquired is desirable to the learner, learning takes place more readily and is more effective from a functional standpoint.

Much discussion is, of course, possible on the meaning of satisfaction. For practical purposes, it may be considered as awareness of the desirability of the new acquisition on the part of the learner. The translation of this principle into functional terms implies that the industrial educator will utilize every means of imparting a sense of the practical importance of the new learnings to the worker and insure that a sense of successfully mastering the new subject matter will attend the act of learning. Obviously, this concept is related to the law of readiness already discussed. The two are not readily separable; in a measure, the difference is one of sequence. In general, it may be said that the whole process of learning must be guided and that somehow the act of learning must be rendered purposeful, functional, and acceptable. It is clear, of course, that the wise selection of curricular material is indispensable to the achievement of this happy result.

We have thus far dealt with some of the fundamental notions which guide effective educational procedures. We have considered these notions very superficially indeed, and possibly without adequate concrete illustration. However, if the mere mention of these principles serves to convey an idea of the complexity of the educational process and of the error of accepting any ill-advised, disjointed, haphazard, and unrelated paragraphs on health as an educational program, then this discussion will have served some useful end.

AT LEAST one other problem must be mentioned here: that of individual differences among the student body which is comprised of industrial workers. Probably nowhere are the differences of educational background, interests, philosophy and aspirations greater. To hope that any one type of program and procedure will meet the needs of all is to hope for the unattainable. Perhaps all that can be said is that some criterion or criteria of approach must be adopted. Should an effort be made to reach all workers by varied types of programs? Should the effort be directed only where an apparent need exists? Or should some plan be evolved to reach a majority? How much responsibility

for health education can industry be expected to assume? At present, no answers can be given applicable to all industries.

It is possibly best that under the guidance of basic educational principles each industrial entity define its own problem and proceed accordingly.

A WORD of counsel might be offered as to educational devices adopted. The use of the printed word, however good, is only one possibility. Health literature is convenient and, of course, basic. But there should be no neglect of other procedures. Visual aids in their many forms—such as films, slides, and exhibits—are of great value. Lectures, appropriately planned and appropriately delivered, discussion in well selected class groups, and individual conferences are all highly useful. However, it must not be forgotten that the skilled function of teaching can be entrusted only to those adequately trained to carry it out. Success is likely to elude the efforts of the untrained.

Without attempting to present an exhaustive review of existing educational programs, it might be of interest to refer to certain recent work in the field which has been carried out by a number of large industries. I refer to the nutrition education programs which have emerged on the horizon of health education in industry as some of the most extensive educational ventures yet attempted. Details of these programs are undoubtedly well known to many in this audience. It will be of interest to note briefly how the various phases of these programs conformed to the basic educational principles mentioned.

In the first place, it will be recalled that several forces tended to focus the interest and attention of people upon nutritional questions. Rationing and efforts from a variety of sources to explain current food problems played a significant part. There was generally a "mental set" towards nutrition education, a readiness for pertinent instruction. Several of the programs which evolved were carefully and effectively planned. One company gave concrete and practical instruction in its cafeterias by actually presenting a variety of well balanced meals, which it offered at such cost that many workers selected them in preference to less wisely chosen menus. Obviously, this type of education—with its repetitive aspects, its complete and utter simplicity and its direct visual and gustatory appeal—can be assumed to possess a high degree of effectiveness; but, again, it is a type of teaching not easily possible in many other phases of a health program.

In addition, this company presented to large numbers of housewives, a carefully prepared series of lectures including actual demonstrations and discussions. Visual aids were used in a variety of forms—the concrete objects themselves were exhibited and films were utilized. Beyond these measures, monthly booklets were issued to interested employees. These publications constantly reviewed the principles of nutrition, gave a wealth of illustrative material, and motivated the learning and application of the new knowledge. Health, beauty, and patriotism were among some of the motivating forces used.

It is clear that these programs adhered to the laws of readiness and exercise, and that they satisfied the requirements of the law of effect, since their character was such that learning was actually a desired and desirable accomplishment. Moreover, the great diversity of content both in respect to difficulty and to subject matter met the needs of varied groups of widely different backgrounds and interests. And of greater importance, too, was the choice of able, well-trained dietitians who could carry out the teaching procedures with a high degree of skill. In the literature as well as in the "class-room" work each topic was evolved with full awareness of the food information, habits and prejudices which existed in the groups seeking nutritional instruction. Consequently, the principle of apperception was met, and the new knowledge imparted was soundly based upon that which the audiences already possessed.

It may be repeated that the educational devices in such a program included more than the printed word: lectures, demonstrations, visual aids, and group discussions were used. Even some partial voluntary testing of learning achievement was attempted by presenting brief examination questions in some of the publications issued.

WE SHALL leave our discussion with this brief illustration. We reiterate that any program of health education in industry worthy of that designation must recognize and satisfy the basic laws of learning; it must utilize subject matter and procedures adapted to the great individual differences of the workers involved; it must present adequate opportunities for teaching in order that the feasible teaching devices may extend beyond the printed word; and it must be conducted by personnel trained not only in the content of the program but also in the difficult art of effective teaching. We do not deny the value of educational efforts which fail to meet these criteria. We believe, however, that such haphazard attempts at health teaching should not be regarded as constituting good and adequate programs of health education in industry. We do not seek to define the legitimate responsibility of industry for such education. That issue is beyond the range of this paper.

It is appropriate, moreover, to measure the value of any program which may be attempted in terms of objective criteria rather than in terms of what we might desire the program to be. In other words, we must judge the program in terms of its objectives, its substance, and its effectiveness rather than in terms of a title which may or may not properly represent its nature and its worth.

---

THERE is a tremendous human inertia against preventive activities. This is in part attributable to the fact that the benefits of prevention are indirect and can be revealed only statistically. Statistics have almost no emotional appeal. We can not tell people that unless they carry out preventive activities they are sure to get into difficulty, for such is not true. We can say only that a certain number of so many thousand individuals will be benefited, but we can not predict just which ones these will be. Therefore continuing to offer adults preventive medicine as it is now understood will probably accomplish very little, for the great majority of people will continue to prefer to take chances and to assume that luck will be on their side. However, if we merely change the phraseology and broaden our meaning of prevention, there is hope that as much can be accomplished for those in later maturity during the next 75 years as has been accomplished for the young in the preceding seven and one-half decades. Let us take as our major objective *the construction of greater health rather than the avoidance of disease.* We then will offer the individual patient something which is personal and individually demonstrable. Preventive medicine has a negative connotation; constructive medicine is positive. The concept of health construction as a phase of medical practice is not new, though the phrase is. Pediatricians have demonstrated that it is possible to make well babies healthier. There are no reasons whatever why it should not be similarly possible to make relatively healthy adults healthier.

—From "Preventive Geriatrics," by EDWARD J. STIEGLITZ, M.D., in *Journal-Lancet*, February, 1945.

# Re-employment of Ex-Service Men and Women
## V. Training Program

IT IS the purpose of this booklet to deal briefly with training as it will bear directly upon the problem of the re-employment of ex-service men and women.

### The Training Problem

GENERAL *Educational Training:* The returned veteran may seek training because of his desire to complete an education interrupted by his call to service, or because of new interests arising out of service experience. In the present war individuals and groups have received more intensive training in technical and semi-technical fields than many of them would have received in civilian life. This has naturally aroused interests and ambitions that might otherwise have lain dormant. To meet this demand the government is making available very broad training and educational opportunities.

While many of the returning veterans falling within this group will seek further training and education through public training facilities, some will seek this training as apprentices. In either event the training may be on a cooperative basis—a plan which is coming increasingly into favor—although the apprentice training in many instances may be handled wholly within industry.

*Specific Skill Training:* There will be other veterans who, while not seeking a broader education as such, will require some degree of training to enable them to refresh themselves in old skills or to pick up new skills pertinent to immediate employment. This group will offer no unusual problem to industry. Industry has done this type of training in a conspicuously successful manner throughout the war.

*Rehabilitation Training:* This group may overlap both of the preceding groups and will include those veterans who, because of physical or other handicaps sustained while in service, must be given some degree of rehabilitation training before they are employable in industry. Depending upon the circumstances in each individual case and upon the training facilities in the community and possessed by the employer, these individuals may receive a part or all of their training through public training facilities, either on a full-time or cooperative basis, or they may be trained solely within industry, or a combination approach may be used.

*Supervisory Training:* In addition to veteran training as such, and directly related to the problem of the re-employment of ex-service men and women, is the training of the supervisory organization to insure a complete understanding of the legal rights of veterans, of the employer's policies, and of the procedures established to implement these policies. The need for this type of training will exist in varying degrees in every organization which has the problem either of re-employing its own ex-service men and women or of employing these as new hires.

### Veterans' Assistance Program

THE veteran may be entitled to training in public facilities at the expense of the government, or he may be entitled to financial assistance from the government while being trained by the employer, or through a cooperative training program set up by the employer in conjunction with public training facilities. Without attempting to discuss his rights in these particulars in this paper, reference is made to the booklet published by the National Headquarters of the Selective Service System, titled "Information Concerning the Veterans' Assistance Program of the Selective Service System," which may be secured from the Government Printing Office, Washington, D. C. Furthermore, complete information concerning the training assistance available to the veteran may be obtained from any Selective Service Local Board, as well as from other agencies established to render assistance in the re-employment of ex-service men and women.

Because in many instances the nature of the training offered by the employer and the time required will necessitate the payment of training rates substantially below rates which will be earned after the individual becomes a qualified operator, it is important that each employer fully understand the benefits to which the veteran is entitled, and cooperate with the veteran in seeing that these are obtained. Instances will be found where an employer would hesitate to place a veteran in an industrial training program at the standard rates appropriate to such training, because the veteran may be married or have other responsibilities which will preclude his being able to maintain himself and meet his obligations at such rates. However, where any degree of disability exists, the training rates paid by the employer, supplemented by the veteran's base pension and by his training bonus, may make such training entirely practical.

### Public Training Facilities

WHERE the veteran seeks and is entitled to extensive vocational training through direct government aid he will doubtless be trained through public training facilities, i.e., colleges, public schools, etc. Generally the prospective employer will not become involved in these cases until training is completed, and, therefore no discussion of this training is undertaken in this paper.

### Training Within Industry

THERE are two broad classifications of training within industry—(1) Apprentice or Trades Training, and (2) Specific Skill Training.

*Apprentice or Trades Training* usually covers a period of from one to four years under a definite plan which is designed to develop the individual as a craftsman or journeyman in some particular trade, such as tool and die making, sheet metal working, drafting, pattern making, etc. While it is not always customary, it is believed that this training program should embrace not only the actual craft or skill training carried on in the shop but also reasonably supplementary and related academic training to insure that the individual has an adequately sound background of technical knowledge upon which to base his trade or profession. A program so planned not only meets the requirements of providing journeymen but also provides much better promotional material for supervisory positions.

There is a very definite practical

THIS is one of a series of booklets designed to familiarize the employer and his supervision with the problems and rsponsibilities incident to the re-employment of ex-service men and women. This series is intended to stimulate sound, constructive thinking and to guide a practical approach to the end that smaller industries may assume their proper role in affording every possible opportunity to our returned service men and women to again take their place in our industrial, economic and social life. The program suggested in these booklets is based upon the experiences and practices of companies having well organized personnel functions, and upon official interpretations of the law itself. These booklets include the following titles: No. 1, "Obligations of Employer" (INDUSTRIAL MEDICINE, October, 1944); No. 2, "Job Analysis for Sound Placement" (INDUSTRIAL MEDICINE, November, 1944); No. 3, "Medical Program" (INDUSTRIAL MEDICINE, December, 1944); No. 4, "Placement and Follow-up" (INDUSTRIAL MEDICINE, February, 1945); No. 5, "Training Methods" (above).

limit to the number of apprentices which industry may undertake to train. Two considerations determine this limit. In those industries operating under a union contract the number of apprentices, or the ratio of apprentices to journeymen, is frequently firmly established by union agreement. Second, whether or not the foregoing exists, the training of apprentices should have a direct relation to the actual need, present and future, for the particular skill or craft within the industry, and should also take into consideration the availability of journeymen in the labor market to meet this need. Where there is no contract limitation and where there is a definite plan of promoting from those trained under an apprentice program, the number inducted into training may be increased somewhat in light of the expected flow from the trade to other positions. Practical limitations however do exist, and each employer who operates an apprentice training program must of necessity take these into consideration if his program is to be successful.

Sound considerations and not sentiment should govern the size of apprentice training programs and the selection of individuals for inclusion. Veterans should be selected with no less care than others, both in fairness to the veteran and in fairness to the industry. Careful consideration should be given to the individual's aptitude for the type of work for which training is undertaken, to his capacity to absorb and use requisite technical information, and of course to his physical capacity to carry on the trade in question. Where the trades training is expected to serve as the background for promotion the individual's promotional capacity is also an important factor. Age must be considered, particularly with regard to the length of the program.

For employers who do not already have apprentice training programs it is pertinent to suggest that where the organization is equipped to provide the shop training but not the related technical training it is frequently possible to arrange related technical training through vocational school facilities. Where this is done it is important that the entire program be just as carefully coordinated as it would be if the industry undertook to offer the training without outside assistance. School authorities are usually quite willing that the coordination and direction of the program from an over-all standpoint rest with the employer.

In New York State, help in arranging an apprentice program may be obtained from the New York State Apprenticeship Council and the Bureau of Industrial and Technical Education, New York State Department of Education, Albany.

*Specific Skill Training* is intended to give the individual the skill and knack requisite to performing a specific job, or, somewhat more broadly, a general type of job. Illustrative are: machine tool operators, either specialists or universal; solderers, either specialists or universal; welders; assemblers; testers; various types of inspectors; blueprint reading; use of measuring instruments; etc.

This training may range, literally, from a few minutes to several weeks or months, depending upon the extent of the skill or knack to be acquired. Usually it ranges from a few days to a few weeks. It should be clearly understood that this training is less extensive in nature and much more highly specialized than is apprentice training, although each has to do with the teaching of skills to some degree.

Where the training is of brief duration, or where it may be carried on by intermittent direction, it may be possible for the foreman to handle it without assistance. Where it is of longer duration, or where it requires constant attention on the part of the instructor, it is usually impractical for the foreman or supervisor to attempt it; consequently instructors or trainers are used. Whichever is used, it is important that the person who is doing the training understand how to instruct if efficient results are to be obtained.

The question of where the training is to be given is important. Where the training itself is simple and the time required is short it is customary to provide it on the job under the direction of the foreman or supervisor or of an instructor. Where the training is of greater length and more intricate, and where intensity of application is necessary for efficient results, it may still be done on the job, but increasingly it is done in segregated areas where there is a minimum of disruption of the individual's attention from the work being performed. Even very small shops will find it worthwhile to consider the segregation of training where the process is in any degree complicated or difficult. It is not unusual for the training time under reasonably good shop conditions to be halved when the training is segregated and properly controlled. This indicates the practical value of giving the method of furnishing the training serious consideration.

This type of training is so common in industry that almost every organization, whether large or small, is familiar with reasonably modern and efficient training techniques. Every industry is doing such training, whether it recognizes it as training or not. The problem of training or re-training returned veterans is no different from that of training other individuals unless the veteran is handicapped. Then, of course, special problems may be encountered. Valuable assistance in the form of advice and actual courses may be secured from the Training Within Industry Bureau of Industrial Service, State Department of Education, Albany, New York, or frequently, through the local schools.

### Supervisory Training

SUPERVISORY training includes the training of supervision in company policies and procedures; in supervisory techniques; upon occasion in technical skills such as blueprint reading, use of precision measuring instruments, etc.; and, with increasing frequency, in human relations techniques.

It is not the purpose of this paper to discuss supervisory training as such. It is, however, very important to point out that primarily upon supervision will rest the outcome of any veteran re-employment program.

The importance of adequately informing supervision as to the program itself is stressed in Booklet IV of this series (INDUSTRIAL MEDICINE, 14:2, 85-87, February, 1945).

### Rehabilitation Problems

EACH case of physical or nervous impairment will offer its own peculiar problems not only in placement and followup generally but more particularly in training. The therapeutic value of training in dealing with these cases cannot be overstressed. Once the individual realizes that he is on the way to taking his place in business and industry in a normal fashion, and towards a useful life, his recovery, whether physical or mental, is automatically and inevitably speeded up.

Most of industry has done far more rehabilitation training than it has stopped to consider. The person with any degree of physical handicap, whether just muscular stiffness and inflexibility, the loss of a member, or impaired vision or hearing, has offered a training problem on whatever job placed. To

whatever extent the job requirements are compatible with the individual's handicap the training is of course simplified, and in many instances probably has not been consciously recognized as training. Therefore, as the initial approach to training, reference is made to Booklet II of this series (see INDUSTRIAL MEDICINE, 13:11, 910-914, November, 1944) as an aid towards the sound selection of the job or occupation for which the individual is to be trained. This step should precede any training except that of a most general nature. Those engaged in training within the industry can be depended upon to determine pretty readily and pretty accurately whether within their own knowledge and experience they are competent to train the handicapped individual for a specific job once the job has been soundly selected. Where they are in doubt, or where they are definitely incapable of handling the situation, the assistance and guidance of the nearest Veterans' Administration should be sought, either directly or through the local Selective Service Board or one of the other established agencies. Even where industry cannot undertake rehabilitation training itself, it can aid and cooperate in that training and lend great encouragement to the individual where the facts warrant such encouragement. The training of a handicapped worker should be approached in a spirit of cheerful optimism tempered with sound realism. Holding out unattainable goals and false hopes and promises will serve no useful purpose and can easily be disastrous.

### General Considerations

THROUGHOUT this series of booklets an effort has been made to stress the importance of each individual organization recognizing its responsibilities in the re-employment of ex-service men and women, establishing a program appropriate to the size of the organization, with particular reference to the number of men and women who may be expected to return from service, and the assigning of responsibility for this work. Without minimizing the problem, it has been our purpose to show that if it is approached soundly it is by no means insurmountable. We have endeavored to stress the fact that every employer can make some contribution and that the sum total of these contributions will go far towards insuring the return of ex-service men and women to their proper place in the industrial, economic, and social life of the nation and the community.

Worthy of attention is an article titled "Training Methods" appearing in the August, 1944, issue of the *Monitor*, published by Associated Industries of New York State, Inc. In this article the authors, William J. Small and James Hagen, have given a splendid outline of training methods which would be of interest and value to everyone engaged in industrial training.

---

## Industrial Medicine in England

*Review by*

C. O. SAPPINGTON, M.D., Dr.P.H.

INDUSTRIAL MEDICINE, Edited by SIR HUMPHRY ROLLESTON, and DR. ALAN MONCRIEFF, with an Introduction by AIR VICE-MARSHAL SIR DAVID MUNRO. Published on behalf of *The Practitioner*, by Eyre & Spottiswoode, Ltd., London, 1944, 202 pp.; 16s.

THIS little, thin volume has packed into it a great deal of concentrated information with respect to the practice of industrial medicine and surgery. It is one of a series of "The Practitioner" Handbooks by the same editors as above named.

Eighteen contributors write on different subjects, as follows: Industrial Medicine and the General Practitioner; Industrial Poisons; Industrial Dermatoses — Diagnosis and Treatment; Chest Disease in Industry; Miners' Nystagmus; Toxic Anaemia; the Treatment of the Injured Workman; Backstrain; Neuroses in Industry; Malingering; Nutritional Problems Related to Industrial Workers; Adolescents in Industry; Fatigue and Boredom; Lighting Problems; Ventilation and Heating; Welfare Services; the Works Ambulance Room; and Factory Law in Relation to Health and Welfare. There is a short appendix containing a list of regulations, welfare orders, and orders in council applying to unhealthy industries, with the title of the regulations or orders in one column, the nature of the act and the date, and the health risk involved in other columns. At the end of most of the chapters, there is a list of references which are mainly English in origin, although there are a few American citations scattered through the book.

In such a small volume it is impossible to give a great deal of attention to detail and this is, of course, evident; what is expected from this material is a summary of important points for the use of the general practitioner and also an outline for works physicians to follow.

The introductory chapter on "Industrial Medicine and The General Practitioner," by AIR VICE-MARSHAL SIR DAVID MUNRO, contains some very interesting statements from which the reviewer feels it is wise to quote:

"Works medical officers, men and women, now comprise a noticeable proportion of the whole number of practitioners in the country; a proportion, moreover, which has a representative voice through its Association of Industrial Medical Officers. Industrial medicine, as a special branch of medicine, and as a corollary, industrial nursing as a special branch of nursing, have come to stay: but it remains medicine—not a mystery or a new art. Moreover, it can be practised with success only when there is close collaboration between the works medical officers, who look after the workers during their working hours within the factory, and the general practitioners who look after the same workers in their homes. Hence the reason for general practitioners to understand something of what industrial medicine means, and what works medical officers do. . . .

"It is doubtful if the medical profession ever thinks very much about the effects of methods of production and conditions of work on health. In earlier days most medical practitioners doubtless knew that sitting at a loom might produce bursitis over the ischial tuberosities — 'weavers' bottom.' 'Beat hand' was, and is, familiar; and 'phossy jaw' now fortunately about as extinct as the dodo. But the days of handicraft have given place to the era of mechanization highly organized on a vast scale, and bringing with it complex and often unsuspected problems. The organic chemist, for instance, is an inventive menace to health! He discovers in his laboratory new substances, such as solvents, even deducing them *a priori* by juggling with chemical formulae. These are given trade names and put into industrial use. The first time they may fall under suspicion as injurious to health may be through a crop of severe dermatitis cases or a death from their toxic effects. This latter has happened. Or the machine designer invents a new machine which quickens productions but is ill adapted to the human being who has to operate it, and produces strains and fatigue or even surgical deformities due to faulty posture. Again, with the speeding up of modern industry the psychological effects of ill-considered methods of production—and still more ill-considered selection of personnel for their posts—are protean in their symptoms. . . .

"'Industrial' is an overworked adjective. There are some who seem to think that by adding it to a noun they have created a new condition. Such people are capable of diagnosing 'industrial appendicitis' in a patient, merely because he happens to work in a factory. In fact, all the ordinary diseases may happen to workers and are the same diseases whether they occur in a hospital, in a factory, or in the home—a burn is a burn all the world over. But they may differ in their characteristics. For instance, some chemical burns are characterized by symptoms which differentiate them from other types of burns, and by special pathological

changes in the tissues. As these burns rarely occur except in connection with the processes by which the chemicals are made in factories, they might be termed 'industrial.' It might, however, happen that these chemicals were used in warfare, when the burns would at once cease to be specifically 'industrial.' Dermatitis provides a better example, for inflammation of the skin and subcutaneous tissues due to irritants is a common disease which is not confined to industry, and presents common symptoms, whatever the particular cause may be. Well marked types, however, are found to be connected with particular substances used in industry, and these can be said to have earned the term 'industrial dermatitis,' as their contraction by a worker is specifically due to his occupation.

"'Industrial medicine' in other words is 'occupational medicine.' General practitioners, even those who practise in industrial areas, rarely realize to the full the number of disabilities which are either caused by specific conditions of work, or are altered in character by the patient's occupation; and, what is more unfortunate, they sometimes attribute the disabilities met with in their practice to conditions of work which could not possibly have caused them—a state of knowledge which is reflected in some medical certificates of fitness or unfitness for work sent in to works medical officers by general practitioners. It may be asked, 'how can a general practitioner be expected to know what goes on inside a factory?' His busy practice takes up all his time. Yet there is much that is profitable for him to learn by visiting factories, could he but spare the time....

"It cannot, of course, be expected of the general practitioner that he should be an expert in industrial medicine—a sort of factory medical inspector, works medical officer, and industrial psychologist rolled into one. It is enough that he should have his background of general medicine added to by some understanding of the problems of this special branch, and essential—with a capital E—that he should work in the closest cooperation with his brother practitioner in the factory, and that both should take joint counsel and action in the interests of their common patients....

"What has been written about medical practitioners very properly applies also to nurses, for to practise industrial medicine without the aid of industrial nurses is like trying to be a general without a staff of trained officers. Indeed, more than one manager of a factory has expressed the opinion that if he had to choose between having a part-time medical officer or a whole-time nurse, he would rather have the nurse!"

This is a very important volume, obviously, for general and industrial practitioners in England; it can also be read with a great deal of profit and benefit by American industrial physicians and surgeons. As a corollary volume to American industrial medical books it should find a very important place in the libraries of American industrial physicians and surgeons, not only because of its excellent point of view but also for the stimulation this book can give to the practice of industrial medicine in America.

## TEN YEARS AGO in INDUSTRIAL MEDICINE

DR. H. H. DRYSDALE, "Medicolegal Hazards,"* in INDUSTRIAL MEDICINE, 4:3, 124-128, March, 1935. Extract: "In medicolegal practice there are many angles the inexperienced should know about, if he is to avoid unpleasant complications. First of all, a physician should never make a complete examination of a woman without her consent. Even then a third person should be present. If an examination is to be made by medical men representing both sides of a controversy, and you are acting for the defense, permit the plaintiff's physicians to make the vaginal investigation first. It is also a safe procedure to examine a virgin through the rectum unless you have full permission to do otherwise. If you happen to be a radiographer, and an alleged injured foot or hand is to be examined, do not fail to radiograph the opposite member for comparison. A perfectly capable x-ray specialist not long ago radiographed a supposedly maimed foot and reported a serious and irremediable deformity. The roentgenologist called by the defense submitted plates showing a similar deformity in both feet. Be cautious also in testing surface sensibility with a pin or needle, picked up loosely. Use a pledget of cotton. A well known physician took a pin out of his vest and prodded an alleged palsied arm in four separate places. The claimant, an emotional, unstable woman, declared the arm was completely benumbed. A week thereafter she signed an assault and battery warrant against the doctor and exhibited four beautiful ulcers, the size of a dime. I was present at the examination and saw the arm after the ulcerations had developed. An adjustment was finally made but not until then was it learned that this woman wilfully placed a drop of carbolic acid on each of the four prodded spots. Another instance of the same character, concerned a man who ate a little soap each day to keep him emaciated until his damage suit was settled. He had a mortgage on his home which this suit was expected to lift. You should also be advised that the introduction of syphilis as a defense in a personal injury law suit is always dangerous, even though it is the actual cause of the claimant's disability. Some of the largest verdicts have been returned in cases where such a claim was made. In the first place a physician cannot deny that people afflicted with syphilis may, at the same time, have other diseases and infirmities, and he must also admit that the Wassermann test is not infallible as a diagnostic aid. Then again the courts have ruled that physical violence, plus shock, may bring to the surface a dormant lues, and if the individual had not been traumatized the disease might never have developed. The attorney for the plaintiff, under such circumstances, takes the position that his client always led an upright, wholesome life, that he previously enjoyed robust health, was never treated for such a disease, was industrious in his work, and perhaps an active churchman. Such a person, in his opinion, could not possibly have acquired so vile a malady. Or he may argue, as a certain prominent lawyer did not long ago, that if it was true his blind client was syphilitic, as the doctors contended, the condition must have been inherited. The fact, however, that he did not have the privilege of choosing his parents absolves him from all blame. With tears streaming down their faces, the members of the jury took up their deliberations, and in a few minutes brought in a verdict of $45,000. When examining a claimant for the defense, and the attorney for the plaintiff is present, take special care in making your investigation complete and thorough. Your every move is being noted, and if you are hurried or careless you doubtless will hear about it on the witness stand. It is also a favorite pastime for a cross examiner to have the physician give the length of time he consumed in making the examination. By this he hopes to show you were not as painstaking as his physician. If you are testifying in behalf of the defendant and you have expressed the opinion that the claimant has recovered and is now normal, the opposing counsel will probably attempt to prove you are prejudiced by asking if his client is a malingerer. Do not fall into this trap unless the general impression prevails that he has exaggerated his condition. The question is best answered by stating that you are not prepared to pass on the litigant's veracity. You can, however, add that your examination proved negative and you could discover no physical basis for his alleged complaints. When a cross examiner decides to test your knowledge he may read a sentence from a certain book and ask if you agree with it. Request him to read the entire paragraph and tell you when the book was published. If the work is more than five years old, you are well within the truth in asserting that medical science has advanced so rapidly that such a book is practically obsolete. If the edition happens to

*Presented at the 19th Annual Meeting of the AMERICAN ASSOCIATION OF INDUSTRIAL PHYSICIANS AND SURGEONS, Cleveland, 1934.

be of recent date and the paragraph he read is not in harmony with your personal observations and experience, do not hesitate to say so. Another favorite stunt of attorneys is to inquire if it is not true that medicine is an inexact science and physicians, therefore, are very apt to be mistaken in their professional conclusions. You may concede that his hypothesis is partly correct, as it is human to err, but you doubt very much if doctors are any different from lawyers in that regard. He will then want to know if you are possibly mistaken in the diagnosis of the case on trial, to which you may reply that you do not think so, because you attended the claimant at the time of the accident and, subsequent thereto, every approved test was utilized and confirmed, and the likelihood of error was eliminated long ago. Sometimes a cross examiner will attempt to irritate or arouse a physician, by requesting him to name the amount of his fee for testifying. In some instances, judges have sustained an objection to this type of question on the ground that a charge for such service is legitimate and, therefore, has no direct bearing upon the issue involved. When you must answer, do so frankly and honestly, but there will always be the temptation to ask the lawyer if he would be good enough to state what percentage of the hoped-for verdict he plans to withhold for himself, as this would greatly assist you in arriving at a fair charge."

## The Art of Industrial Medical Practice

ROBERT H. CROSS, M.D.,
*Medical Director, Savage Arms Corporation, Utica, New York*

INSPIRED by progressive management, insisted upon by labor, reluctantly tolerated but finally valued and accepted by the rest of the medical profession and given great impetus by wartime necessity, the practice of industrial medicine by the industrial physician has been born, reared, and is now wearing its long pants. Old men retired from practice, a pediatrician inspired by the need, young, recent graduates, seeking their place in the profession, the opportunist; the well-established industrial doctor have all in the past few years, taken up this great opportunity. They have started with certain basic principles, and are providing a service to industry and the profession that has long been needed. They are achieving remarkable results leading the way to newer concepts of disease, in the treatment of injuries, in the prevention of accidental injuries and occupational disease, and in assisting good personnel practice by the more efficient placement of men in their jobs. Let us be under no misapprehension about the need or the future of industrial practice.

First, in definition, the industrial physician is not the general practitioner who now and then, or even daily, sees a case; nor the surgeon who does some industrial surgery interspersed with his general cases; nor the compensation doctor who sets up a suite exclusively to repair the damages from the industry around the corner; nor the practitioner who routinely does examinations with no end in view but to run through the mill and record the status of dozens or hundreds of men; but I give you the physician in industry. He may be a general practitioner, an internist, a surgeon, or a full-time doctor. Whichever he may be, the practice of industrial medicine must now and henceforward be a service requiring a degree of skill and a breadth of vision heretofore not asked of a physician if there is to be any measure of success in the enterprise.

With this premise in mind, it is the intent of the writer to present certain concepts of industrial medicine and industrial practice that are essential to its perpetuation. No institution survives unless the need be ever present. Basically then, with our ever-expanding industrialization, this practice cannot help but become more and more a specialty of medicine. I am firmly convinced it has reached that stage, and that the future is bright for every phase of its development.

### The Job and the Man

IN 1942 the War Manpower Commission set up the following conditions that must exist if a physician employed by industry be deemed essential in the job:

1. The physician is employed by an industry which is manufacturing war materials exclusively or under priority ratings, and

2. The physician gives his full time to the industry or 40 or more hours weekly, has been employed so for at least two years, or is especially trained for that purpose and is carrying on an acceptable health maintenance program, and

3. The physician is performing the function of a medical director or department head, or of a specialist, or is the only physician employed.

4. Assistant physicians, who perform routine functions under direction and are employed on a full-time basis, are deemed essential until they can be replaced within a reasonable time.

These indeed are strange times. The above conditions were drawn up as a necessity for wartime economy of medical man-power. That need is still pressing, and if you read carefully again these conditions, you will note how comprehensive they are and what a good yardstick they become. No one, at the present moment, can deny or refute one single stipulation.

But what about the future, the postwar period? Then some of this becomes mere patter. Essentiality of a physician in industry then will not be dependent upon the manufacturing of war materials, and, I assume the industrialists certainly hope, not on the priority ratings. Essentiality of a physician in industry will not be contingent upon his spending full time or 40 or more hours per week. It will depend upon the need of the industry as judged by its complement of personnel, its hazards, its accident rate, its type of manufacturing processes.

Will essentiality of the physician be dependent upon one being especially trained for that purpose? No. There is no such thing as training for industrial practice now except the long, hard road of experience.

Will it be essential that the physician in industry carry on an acceptable health maintenance program? Yes—equally as much as today. For all practical purposes, then, the point is not that he need have attended certain courses nor had certain experience, nor spent certain hours, but that he must apply a sufficient amount of time and interest to the problem to carry out the following functions: that he can organize and direct or carry out a medical service including preplacement examinations, first aid and subsequent care or control of all occupational injuries or illnesses, the keeping of complete and adequate record systems and the controlling of sanitary conditions in the establishment. But more than this he should spend enough time in the job so that he can familiarize himself with the processes in his industry. For this reason, one of the foremost responsibilities of the physician in industry is the practice of preventive medicine. This, in itself, requires that the engineer, the safety man, the chemist and the doctor work together to eliminate hazards, to prevent accidents, to abort occupational disease. There can be no success in industrial medicine practiced by a visit or two a week to examine some injured men or hear some complaints.

The practice of industrial medicine does not require any more skill than is required of any other physician but it does now, and in the future will, require more

attention, more knowledge of what can happen and why it happened in industry. This can only be gained by a thorough understanding by the physician of his industry whether this takes two hours a day or 10 hours a day of work.

To make the point more clear, here is an example of practical importance. Some time ago an employee consulted our medical department because of a dermatitis of the arms and hands. In obtaining the history, we found he was working on a degreasing job recently set in operation, using tetrachlorethylene, a highly poisonous material. We had knowledge of the effect of this solvent and discovered that the patient also complained that he slept unusually well, in fact, slept often on the job but couldn't help it. Naturally enough to us, for he was being partially anesthetized by the tetrachlorethylene (similar to chloroform). Investigating further, we found that—necessity being the mother of invention—the degreasing machine was a home-made contraption, widely exposed, improperly functioning, and extremely dangerous and hazardous. We insisted upon and obtained a change to a new, automatic, carefully controlled, adequate, non-hazardous machine. We have since read in medical literature of seven deaths due to this process. We wonder if we did not do some good. We also remember the days when this patient would have been seen and treated by a physician who though he perhaps recognized the dermatitis as a contact one due to this solvent, had no entree to the interior workings of the plant and had no authority to advise or recommend changes in the mode of work. From this another lesson can be learned. The bridges should be laid before they are crossed. How much better it would have been if, when this new method was introduced, the plan had passed through a group of well-versed capable people such as the engineers and chemists, and the safety and medical departments to find whether it presented any unusual hazards before being put into production.

So much for the industrial physician and the job of industrial medicine. Let's have men who are interested; who will study the problems in the industry at hand; who will set up a well-rounded medical service, not an empty shell.

### Industrial Medicine and Industrial Management

TO BE very honest, it must be admitted that, by and large, industrial management has sponsored industrial medical service usually at first as an economic measure either through understanding of the value to be gained or because of its being urged upon them by insurance carriers. And why not? Experience has proved the actual monetary savings; and, primarily, management is in the business of producing goods at a profit, not of keeping up its overhead. But times are changing. Regardless of the motives for setting up a medical service, those managements who have been progressive and insisted upon a comprehensive medical program are finding that it is a necessary adjunct to production. This becomes more necessary with the present trend of compensation law and court interpretations to become all inclusive, to award benefits to employees regardless of the facts, provided their complaints arise while employed.

Managements want and need more than their own lay opinions, and I feel it can truthfully be said that managements want an honest medical opinion of a positive nature whether it shows some defect on their part or not. Certainly no physician can form these opinions unless he is thoroughly cognizant of the industry he serves; but if he is, there is unquestionably no one in a better position to make the decision. This is particularly true in compensation court work and testimony, and it is with regret that we hear honest, sworn, and accurate testimony of an industrial physician sacrificed at the expense of lay and medical opinions from other sources having little or no knowledge of the condition present.

Managements further need such professional help if they are to use their personnel to the greatest production advantage. They must have medical opinions as to what type of work is possible for the handicapped employee, for the man with heart trouble, for the accident repeaters, etc. They also want to know whether a man is actually ill and must be sent home, or whether this gap in the production line must lie vacant because the worker has earned enough this week and wants to make a fishing trip. It is surprising when wages are high and money is free how often this problem presents itself to the industrial doctor.

Industrial medicine has, then, the responsibility to managements, further than providing a well-rounded medical unit and service, of making professional judgments of a positive nature to protect them from the lay concepts, the malingerers, the mistake of hazardous placement, the biased medical opinions of others.

### Industrial Medicine's Responsibility to Labor

NO LESS honest must the industrial physician be with labor than with management. The employee's protection from accident, from occupational diseases, and from the possibility of their development must be one of the primary concerns of industrial medical practice. It is not enough to say, "It can't happen to you"—it must be known either that it can't, or that no stone will be left unturned to determine that it is or is not possible. In particular I should like to refer to three responsibilities of medicine to labor that are all too frequently neglected, and to which I feel we, in the practice, and especially those entering it, should pay particular attention.

The first of these is the pre-employment and periodic physical examinations. It would seem that these have become a mere formality with weeding out the 5% unfit as their sole objective. If there be any value in them, it is twofold: (1) to determine the physical condition of the employee or prospective employee with the view to making the decision between whether he is fit to do any type of work or whether some disability must restrict his employment, and recommending from a job analysis what the partially disabled individual can do, and (2) to advise the employee of the essential findings so that, if indicated, he may be able to seek adequate help to correct the condition found. Unless these things are done, the examination becomes valueless. Management is not interested in the physical findings except where they preclude certain employment and when this is so, no one should be more interested than the individual in knowing he will be on a job that he will be able to do and that will in no way adversely affect his condition. But the individual who has had the examination is definitely interested in the findings and there is nothing to be gained by withholding the facts from him. Let me emphasize that the procedure of notifying a man of his condition does not need lengthy consultation. It is satisfying to remark to the one man that he is 100% fit, and sufficient to the next that a heart condition is found which, while not alarming, deserves the attention of his physician.

The second responsibility, I feel, is definitely and decisively to advise a patient of the medical opinion you have arrived at when a case is under consideration. I think this is particularly necessary in industrial work. The industrial physician, in the majority of his work other than accident cases, is faced with the employee who has a complaint and expresses the belief that his

troubles are due to his work. If, after careful examination a decision is reached, I assure you far less consternation will result if this decision is given to the patient than if nothing be said. If the condition is related to the work, action must be taken to relieve it and to see that it does not arise again. If it is not due to the work, nothing is to be gained by vague remarks and a quiet and rapid ushering of the man from the office. Remember that, as an industrial physician, you are in a position to know. The employee knows this. You will obtain more respect by being decisive and stating your case, and you will be saving a great many headaches in the future—for all parties concerned.

The third responsibility to labor, no less to management, can be stated briefly. Record what is found, when it is found, and the medical conclusion, and see that those things are kept in a permanent adequate record system. This responsibility is one for not only the industrial physician, but also for the industrial nurse and the first aid practitioner.

### Responsibility to the Medical Profession

IT HAS been a long time coming, and in many communities it will be yet another day before the profession wants to recognize industrial practice as a field in its own right. It has always been true that new methods and ideas must first be time-tested before being accepted. But now it seems that the need is recognized. To perpetuate this and to give it strength, industrial medical practice must have certain responsibilities to the profession. It must continue to hold its respect by performing the best practice possible, by advising—through research and publication—the facts it has learned. It must not assume the work known to be non-occupational. It must continue to insist upon adequate care of non-industrial conditions only for temporary relief until the patient can be seen by his own physician. It should be more insistent in the control of i's own occupational conditions, accidents, and diseases. It should follow the code of ethical practice in no way differently from any other individual or group of medical practitioners.

We, who are in industrial practice, like the happy surgeon, are convinced we have a job to do and one worth doing well. We are making no defense for our existence—those days are passed. There is no branch of medical practice that taxes the ingenuity of the physician more than this one. The problems are many, the personal satisfaction less, but the interest is great and the responsibilities many. I have made no attempt here to give a composite picture of the practice of industrial medicine—time and space do not permit. It has been my effort to show some of the generalizations of the problem and the responsibilities not yet clearly solved. It is hoped that the picture has not been confused, but that the practice will be strengthened by meeting these responsibilities in a non-biased, honest, and scientific way when they present themselves.

---

## The Therapeutic Value of Electrically Activated Vaporized Ergosterol

*—When Administered Intramuscularly or Orally and Intramuscularly in the Treatment of Arthritis—*

CORNELIUS H. TRAEGER, M.D., F.A.C.P.,
WILLARD H. SQUIRES, M.D., F.A.C.P.,
EMMANUEL RUDD, M.D.,
*Arthritis Clinic, Hospital for Special Surgery, New York City*

THE therapeutic value of electrically activated vaporized ergosterol (Whittier Process) administered parenterally in the treatment of a group of 31 arthritic patients was published as a preliminary report[1] in 1943.

This treatment alone, given once weekly in doses of 1,000,000 to 1,500,000 units, proved beneficial in a majority of the patients treated. Although our results were encouraging and local and systemic tolerance was satisfactory, single doses by the intramuscular route were not uniformly effective in controlling painful symptoms and in some patients did not result in satisfactory progress. It was felt that the combined treatment in daily oral dosages might better control symptoms and result in greater objective therapeutic effects than were obtained with parenteral treatment only.

We now have an additional year's treatment on 15

CHART I—CLINICAL OBSERVATIONS

| CASE NO. | SEX | AGE | CHARACTERIZATION OF ARTHRITIS | | | COURSE BEFORE PRESENT TREATMENT | PREVIOUS |
|---|---|---|---|---|---|---|---|
| | | | Duration | Diagnosis | Extent of Involvement | | Form |
| I R 243 | M | 55 | 3-4 yrs. | Mixed | Shoulders, elbows, hands, fingers, back, hips, knees, and toes | Gradually progressive but much more rapidly for past month. Walks with difficulty. Tonsillectomy in 1939; rectal operation in 1935 | Private doctor<br>Coley's vaccine<br>Gold<br>Ertron (oral)<br>Ertron (parenteral) |
| II N 67 | F | 54 | 7-8 yrs. | Marie-Strumpell | Neck, entire spine, left arm, left knee and both feet | Gradually progressive; started in low back and spread to neck and other affected joints. Stands with perfectly rigid head and neck bent forward slightly. No motion in cervical spine; dorsal spine rigid | Private doctors<br>Ertron (parenteral) |
| III S 595 | M | 39 | 7 yrs. | Marie-Strumpell | Neck, back, chest and hips | Progressive. Started with pain and weakness in legs; patient was unable to stand and was bedfast for 3 weeks. Recurred 3 years later in legs and back and then spread through body | Montefiore Hospital<br>Vaccines<br>Physiotherapy |
| IV B 371 | F | 42 | 18 yrs. | Rheumatoid | Pain and swelling in fingers, wrists, knees and toes | Progressive. Started with swelling of hands and spread with increasing but gradual deformity | Gold<br>Vaccine<br>Physiotherapy<br>Diet |
| V G 375 | F | 30 | 3 yrs. | Rheumatoid | Neck, shoulders, elbows, wrists, fingers, knees and feet | Progressive. Started in feet and spread quickly to other joints | 6 private doctors<br>Injections under one<br>Gold |
| VI T 125 | F | 59 | 6 yrs. | Osteoarthritis | Both knees and right hand | Progressive. Pain and node swelling started in left knee and then in right. Swelling in right hand after hand was smashed in door 4 years ago | Physiotherapy<br>Tonsillectomy (25 yrs. ago)<br>Operation, left knee, 1 yr. ago (removal of patella) |
| VII D 156 | M | 59 | 3 yrs. | Mixed | Both knees, fingers and shoulders | Progressive. Pain started in right knee, then hands and shoulders. Walks with crutches and cane | Physiotherapy<br>Crowe's vaccine<br>Prontylin Gold<br>Synovectomy-patellectomy<br>Ertron (oral)<br>Ertron (parenteral) |
| VIII K 310 | M | 37 | 5 mos. | Scleroderma (associated arthritis) | Hands, fingers, wrists, shoulders, right hip, knees and feet | Progressive. In November, 1941, pain and stiffness in muscles around knees. Five months ago, patient felt pain in feet on walking any distance. Now, affected joints are painful, stiff and swollen. Skin of right hand is tight and shiny from finger tips to above wrists | Vaccine<br>Private doctor<br>Ertron (parenteral) |
| IX S 594 | M | 31 | 3 yrs. | Marie-Strumpell (advanced) | Pain and stiffness in neck, back, arms, left shoulder and hip | Gradually progressive. Started in base of spine and crept through body | Private doctors<br>X-ray (Post-Grad. Hospital)<br>Gold (Post-Grad. Hospital)<br>Physiotherapy (Post-Grad. Hospital) |

of the original 31 patients studied in 1942-1943 and have added to the series at least one year's observations on 14 new patients. These data on patients with an arthritic history of 17 months to 23 years comprise this follow-up report.

The safety of electrically activated vaporized ergosterol (Whittier process) when administered orally has been established and its effectiveness as an antiarthritic means of therapy has been repeatedly shown.[2,3,4,5,6,7] On the basis of studies reported by McChesney[8] on the relative oral and intramuscular effectiveness of $D_2$, $D_3$ and dihydrotachysterol on the chick, it seems not improbable that the antirachitic and potential toxicity of electrically activated vaporized ergosterol (Whittier process) administered in this study was materially less than the actual dosages given might suggest.

In this latest group, cases of severe chronic arthritis were selected for observation, some comprising part of the group which had received solely the parenteral form[1] and some chosen because of their refractory responses to one or more other forms of antiarthritic therapy. Each patient received a weekly intramuscular injection of 1,000,000 to 1,500,000 units of electrically activated vaporized ergosterol (Whittier process) in addition to an oral dose of 150,000 units of the same preparation in capsule form.

As in all previous investigations careful blood studies, including red and white blood cell and differential counts, hemoglobin determinations, blood sedimentation rates, blood nonprotein nitrogen, serology, blood uric acid, calcium and phosphorus values and microscopic and chemical urinalyses were made, in addition to clinical observations and periodic x-ray examinations on all patients. Standard analytical procedures were used throughout. Motion pictures of many of the patients were made before treatment and periodically at six-month intervals thereafter. All evidence obtained shows that a striking clinical improvement occurred in the majority of patients due to this therapy. A perusal of Chart I permits a comparative evaluation of the various procedures used and the results obtained on patients prior to present treatment.

Results from all laboratory studies were within experimental limits and with few exceptions were not remarkable, that is, all were within normal limits or differed in no essential respects from observations before therapy. Thus, the nonprotein nitrogen values ranged from 29 to 32 mg. per cent, uric acid from 3.6 to 3.9 mg. per 100 cc., blood calcium from 10.6 to 10.9 per 100 cc. and blood phosphorus from 3.47 to 3.74 mg. per 100 cc. Sedimentation rates following therapy showed no characteristic change irrespective of any observed clinical change, that is, whether a tendency to remission or recovery or an exacerbation was observed. Sedimentation rates of most patients were abnormal and ranged as a rule from 46 to 53 mm. per hour and revealed, as previously reported in 1941,[2] no consistent correlation with the status of the disease. Thus, values may drop markedly from 43 to 10 mm. per hour with only slight clinical improvement in the patient (R243) or increase from 42 to 70 mm. per hour in spite of a marked subjective and objective improvement in the patient (K322).

In the series of 15 patients studied over a period of more than two years, the response to the oral product, 150,000 units daily (3 capsules) and the parenteral product, 1,000,000 to 1,500,000 units intramuscularly weekly, was as follows: negative results were obtained in one patient (6.6%), slight to moderate results in two patients (13.2%), moderate to good results in eight patients (52.8%) and excellent results in four patients (26.4%).

In the new series of 14 patients clinical results obtained on the basis of a single year's observations are as follows: no change in two patients (14%); slight improvement in two patients (14%); slight to moderate improvement in three patients (21%); good results in five patients (35%); good to excellent results in one patient (7%), and excellent results in one patient (7%).

## X-Rays

STUDIES of periodic x-rays of affected joints indicated that this therapy produced no consistent objective bone changes. Observations indicated that diminution in the degree of joint effusion and soft tissue edema or swelling occurs concomitantly with subjective re-

CHART I—CLINICAL OBSERVATIONS

| TREATMENT | ERTRON ORAL and PARENTERAL | | | TOXIC MANIFESTATIONS | | CLINICAL OBSERVATIONS | REMARKS |
|---|---|---|---|---|---|---|---|
| Response | Started Date | Dosage: U.S.P. Units Parenteral Weekly | Dosage: U.S.P. Units Oral Daily | Local | Systemic | | |
| None<br>Some<br>Some<br>Some | 8-11-43 | 1,500,000 | 150,000 | None | None | Improvement on both oral and parenteral Ertron alone. Has now made further improvement. States combination of oral and parenteral Ertron is more beneficial than parenteral Ertron alone | Works every day |
| Temporary<br>Slight improvement | 7-28-43 | 1,250,000 | 150,000 | None | Nauseated by oral Ertron | Slight general improvement. Helped by Ertron despite intolerance of capsules | Did better on Ertron parenteral alone |
| None<br>None<br>None | 8-18-43 | 1,250,000 | 150,000 | None | None | Has received benefit from treatment. Less pain in back | |
| None<br>None<br>None<br>None | 8-18-43 | 1,250,000 | 150,000 | None | None | Less pain on motion of affected joints | Has received more benefit from combined Ertron treatment than any other form of therapy |
| None under 5<br>Some<br>None | 8-18-43 | 1,250,000 | 150,000 | None | None | Marked improvement with diminution of swelling, disappearance of pain and restoration of function. Gain of over 25 pounds. Excellent result | Had tonsillectomy |
| None<br>None<br>None | 8-18-43 | 1,250,000 | 150,000 | None | None | Improvement has been slow but patient has less pain | |
| Improved<br>Some<br>Improved | 8-31-43 | 1,250,000 | 150,000 | None | Occasional upset by oral Ertron | Believes combination Ertron has helped him. Mild nausea disappears when oral Ertron is reduced or temporarily suspended | |
| None<br>None | 9-28-43 | 1,250,000 | 150,000 | None | None | Skin condition unchanged. Apparently has received some tonic effect from combination Ertron | |
| None<br>None<br>None<br>None | 9- 1-43 | 1,250,000 | 150,000 | None | None | Has received tonic effects from combination Ertron | |

duction in pain, improved sense of well-being and increased joint mobility.

## Safety

ELECTRICALLY activated vaporized ergosterol (Ertron) when taken by mouth has been repeatedly shown to be a relatively safe and effective form of treatment for the arthritic patient.[2,3,4,5,6,7] The previous findings have been confirmed and extended. Thus, special attention was given by means of extensive periodic laboratory examinations to potential renal damage, calcification of blood vessels, blood picture changes and liver damage. Some patients have been observed over a period of eight years. In no instance has a fatality or any serious sequelae been noted. Tolerance usually develops and may be established in the

CHART I—CLINICAL OBSERVATIONS—Continued

| CASE NO. | SEX | AGE | CHARACTERIZATION OF ARTHRITIS | | | COURSE BEFORE PRESENT TREATMENT | PREVIOUS |
|---|---|---|---|---|---|---|---|
| | | | Duration | Diagnosis | Extent of Involvement | | Form |
| X<br>K 289 | F | 48 | 21 yrs. | Rheumatoid | Pain in all joints of body; most severe in hands and shoulders | Progressive with exacerbation and remission. Pain first appeared in left thumb; two years later, spread to knees, then hands and shoulders. Limitation of motion | Vaccine<br>Physiotherapy<br>Ertron (oral)<br>Cock-up splints for wrists<br>Paraffin baths<br>Ertron (parenteral) |
| XI<br>S 457 | F | 39 | 12 yrs. | Rheumatoid | Knees, ankles, toes, hands and wrists | Progressive, especially for past 1 ½ years. Decrease of spinal curves. Marked restriction of both wrists; fusiform swelling of fingers. Objective symptoms progressing rapidly | Tonsillectomy<br>Gold<br>Sulphur<br>Crowe's vaccine<br>Extraction of teeth<br>Ertron (oral) |
| XII<br>W 230 | F | 45 | 8 yrs. | Rheumatoid | Arms below elbows, wrists, hands, fingers, neck, spine and feet | Progressive. Started with pain and swelling in fingers, spread quickly to wrists and hands, then to feet and eventually to spine and neck. Skin glossy on fingers and elbows enlarged. | Osteopathy<br>Vaccine |
| XIII<br>S 578 | F | 62 | 7 yrs. | Rheumatoid | Generalized joint pain, especially in left knee, right knee, hands, left metatarsal arch | Gradually progressive. For 5 years, joints only swollen. Two years ago pain appeared in left instep, right hand and knee, spread 8 months ago to left knee. Double hallux valgus. Arches depressed. Sed. rate: 105 | Physiotherapy<br>Gold<br>Ertron (parenteral) |
| XIV<br>D 205 | F | 36 | 2 ½ yrs. | Rheumatoid | Neck, hands, wrists, knees and ankles | Progressive. Started after operation for kidney stones 3 years ago in index finger of left hand and quickly spread. Fusiform swelling of all proximal interphalangeal jts. and puffiness of both wrists. Enlarged thyroid gland. | Physiotherapy<br>Foreign protein injections<br>Strep. vaccine<br>Diphtheria toxoid |
| XV<br>R 260 | F | 64 | 7 yrs. | Mixed | Head, back of neck, shoulders, hands and feet. Knees stiff after sitting | Gradual progression. Started in terminal joints of fingers with swelling of interphalangeal joint, right hand, spreading to other affected parts | Ertron (oral) |
| XVI<br>B 384 | F | 57 | 3 yrs. | Rheumatoid | Pain, stiffness and swelling; knees, hands, wrists and shoulders | Progressive. Started in feet and spread through body, affecting knees most severely | Vaccine<br>Physiotherapy |
| XVII<br>L 307 | F | 12 ½ | 4 yrs. | Rheumatoid | Pain and swelling of knees, ankles, hands and wrists | Gradually progressive. Started with swelling of finger joints about 4 years ago although mother states swelling of knee has always been present. Walks with peculiar gait, with a limp to the left, protecting left foot | Aspirin<br>Leg casts<br>Foot cast<br>Physiotherapy<br>Occupational therapy |
| XVIII<br>D 49 | F | 47 | 18 yrs. | Rheumatoid | Hips, knees, ankles, back, wrists, hands and fingers | Steadily progressive with exacerbation and remission. Ankylosis of both hips; partial ankylosis of knees and ankles. Only moderate demineralization of bones. Uric acid: 5.4 | Cinchophen<br>Tonsillectomy<br>Coley's vaccine<br>Ertron (oral)<br>Private doctors<br>Physiotherapy<br>Ertron (parenteral) |
| XIX<br>C 239 | F | 40 | 4 yrs. | Infectious | All joints of body; most severe in fingers, wrists, right shoulder, knees and ankles | Gradually progressive. Pain started in right shoulder. Atrophy of muscles of hands and forearms. Unable to flex right 2nd and 3rd fingers and left 2nd finger | Gold (20 injections)<br>Physiotherapy<br>Foreign protein<br>Iron injections<br>Diet<br>Ertron (oral)<br>Ertron (parenteral) |
| XX<br>A 161 | F | 45 | 5 yrs. | Rheumatoid | Shoulders, neck, hands, fingers, wrists, knees, ankles and toes | Progressive. Pain started in knees, spreading to hands, wrists, ankles. For past 2 years, shoulders and neck affected. Partial limitation of motion of ankles, knees, toes. Great pronation of both feet. Cholecystectomy, appendectomy in 1941 | Private doctor<br>Gold<br>Mineral baths<br>Physiotherapy<br>Extraction of teeth<br>Ertron (parenteral) |
| XXI<br>W 212 | F | 54 | 3 yrs. | Rheumatoid | Pain throughout body, especially right shoulder, right elbow, hands and feet | Progressive with exacerbation and remission. When 23, fingers became numb and white in cold weather. Three years ago symptoms gradually spread to right elbow, shoulder and all other joints of body | Private doctor<br>Tonsillectomy<br>Viosterol—Ultraviolet—Irradiated Ergosterol<br>Ertron (parenteral) |
| XXII<br>M 360 | F | 57 | 20 yrs. | Osteoarthritis | Pains throughout body, more severe in hips and right knee | Progressive. Started with pain and swelling in fingers, spread throughout body, very severe in right knee. Pain in left knee started one year ago. Patient walks on crutches and wore a brace for 12 yrs. Right knee ankylosed | Medication under private doctors and in hospitals<br>Home lamp<br>Knee in cast |
| XXIII<br>L 201 | F | 29 | 6 yrs. | Osteoarthritis | Pains throughout body, especially severe in feet and right hip; pain, heat and swelling in right wrist and 1st, 2nd right phalangeal joints | Progressive. Started in feet and hips, gradually crept up spine and throughout body. Acute pain right hip, spasm in all directions. GYN impression—hypofunction of glands | Private doctors<br>Physiotherapy<br>Vaccines<br>Gold<br>Sharon Springs |
| XXIV<br>K 322 | F | 54 | | | Pain in right knee, foot and hand; pain aggravated on walking; swelling and deformity of right wrist | Gradually progressive. Started in knee and spread to other parts of body. Right knee swollen, hot, red; homogeneous demineralization of bones and tremendous degree of synovitis. Patient hypertensive | Private doctors<br>Vaccines<br>Aspiration of knee joint |
| XXV<br>C 316 | F | 48 | 20 yrs. | Rheumatoid | Shoulders, arms, hands, knees and feet. Severe pain in knees; hands badly deformed | Progressive. Started in index finger of right hand, spread to feet, then arms, shoulders and entire body. Hand and wrists show extensive destruction of cartilage and some bone erosion; ankylosis in many joints and subluxation and contracture in others. Knees show thinned cartilages and some erosion and sclerosis of articular surfaces. Slight synovitis; flexion deformity of elbows | Private doctors<br>Gold<br>Typhoid injections<br>Protein |
| XXVI<br>S 273 | M | 51 | 2 yrs. | Mixed | Feet, toes (left), left leg, left knee, cervical spine and chest | Progressive. Acute onset starting in knees, toes, left leg. Feet show marked D.W.F. Marked synovitis of villous type present | Vaccine: typhoid and autogenous sulphur<br>Gold<br>Shock and fever therapy<br>Hot Springs<br>Short wave<br>Ertron (oral) |
| R 252<br>XXVII | F | 59 | 5 yrs. | Osteoarthritis | Shoulders, fingers, knees, cramps in legs. Generalized involvement of entire body | Slowly progressive. Pain first started in knees. Early Heberden's nodes. Partial limitation of motion with severe pain and swelling in all joints | Hospitalization<br>Physiotherapy<br>Ertron (oral)<br>Ertron (parenteral) |
| T 105<br>XXVIII | F | 54 | 7 yrs. | Rheumatoid | Hands, feet, knees, base of spine | Slowly progressive, becoming much more severe 1 year ago | Physiotherapy<br>Ertron (oral)<br>Ertron (parenteral) |
| C 273<br>XXIX | F | 54 | 11 yrs. | Rheumatoid | Generalized pain in all joints, especially in neck, face, wrists, fingers and knees | Progressive except for short period after extraction of teeth. Pain first started in fingers. Fusiform swelling of hands and wrists. In 1942, removal of rectal abscess, fistula and appendix | Vitamin B complex<br>Tonsillectomy<br>Viosterol—Ultraviolet Irradiated Ergosterol<br>Ertron (oral)<br>Extraction of teeth |

presence of nausea or anorexia by reduction or temporary discontinuance of oral medication with reinstitution of such therapy seven to ten days later.

Parenteral Ertron has also been investigated and patients have received injections of 1,000,000 to 1,500,000 units with no untoward results and with definite clinical benefit. As stated in an earlier publication,[1] no cases of gastric distress were seen when Ertron parenteral alone was used. The combination of these two forms of electrically activated vaporized ergosterol (Ertron) when administered in high dosages proved to be a safe as well as an effective form of treatment and for the small number of patients intolerant to recommended oral dosages this regime is more agreeable to the patient, as well as being superior therapeutically to recommended dosages by either route used singly.

CHART I—CLINICAL OBSERVATIONS—Continued

| TREATMENT | ERTRON ORAL and PARENTERAL | | | TOXIC MANIFESTATIONS | | CLINICAL OBSERVATIONS | REMARKS |
|---|---|---|---|---|---|---|---|
| Response | Started Date | Dosage: U.S.P. Units Parenteral Weekly | Oral Daily | Local | Systemic | | |
| None<br>Slight<br><br>Slight<br>Good | 9- 8-43 | 1,250,000 | 150,000 | None | None | Continued to improve when put on combination oral and parenteral Ertron | |
| Relief (developed rash)<br>None<br>Some | 9-22-43 | 1,250,000 | 150,000 | None | None | Patient made very little progress on combination oral and parenteral therapy. Transferred to gold therapy | |
| None<br>Some | 9-28-43 | 1,250,000 | 150,000 | None | None | No improvement | Patient erratic in attendance |
| None<br>None<br>Good | 9-21-43 | 1,250,000 | 150,000 | None | None | Helped by combination oral and parenteral Ertron. Has more motion and less pain. Increase in weight | |
| None<br>None<br>None<br>None | 10- 5-43 | 1,250,000 | 150,000 | None | None | Satisfactory improvement; less swelling and very little pain in affected joints | Had tonsillectomy |
| Improved | 10-20-43 | 1,250,000 | 150,000 | None | Nauseated by oral Ertron | Arthritis helped by combination oral and parenteral Ertron | Discontinued oral Ertron because of gastric distress |
| None<br>Good results in hands and feet | 10- 6-43 | 1,250,000 | 150,000 | None | None | Has improved nicely on combination oral and parenteral Ertron | Hospitalized at beginning of treatment |
| None<br>None<br>Improved<br>Improved<br>Improved | 10-26-43 | 1,000,000 | 150,000 | None | None | Has made satisfactory progress on combination oral and parenteral Ertron | Is taking occupational therapy |
| <br><br>Definite improvement<br>None<br><br>Improvement | 11- 3-43 | 500,000 | 150,000 | None | None | No arthritic pain. Stiffness from bony ankylosis of right hip | |
| Not entirely satisfactory<br>None<br>None<br>None<br>None<br>Slight | 10-27-43 | 1,250,000 | 150,000 | None | None | Has made very little progress in past year | |
| None<br>Slight<br>None<br>None<br>None<br>Excellent | 11- 3-43 | 1,250,000 | 150,000 | None | None | Continues to improve on combination oral and parenteral Ertron. Good results | |
| Some<br>None<br>None<br>Improvement | 11-10-43 | 1,250,000 | 150,000 | None | None | Believes combination oral and parenteral Ertron is more beneficial than parenteral Ertron alone | |
| None<br><br>Some | 11-24-43 | 1,250,000 | 150,000 | None | None | No improvement | Is chronic case of 20 years |
| None<br>None<br>None<br>Worse<br>None | 12-15-43 | 1,250,000 | 150,000 | None | None | Very little arthritic pain at present. Satisfactory progress | |
| Slight<br>Slight<br>No fluid | 12-29-43 | 1,250,000 | 150,000 | None | None | Marked improvement. Has discarded cane for first time in several years | |
| Some, but it produced severe dermatitis<br>None<br>None | 2-23-44 | 1,250,000 | 150,000 | None | None | Moderate improvement | Helped despite duration of 20 years |
| Slight<br><br>None<br>None<br>None<br>None<br>None | 7-15-42 | 1,000,000 | 150,000 | None | None | Believes combination oral and parenteral Ertron has been best form of treatment | Has discarded special cervical spine brace |
| None<br>Temporary relief<br>Excellent | 5-10-44 | 1,250,000 | 150,000 | None | None | Very little pain from arthritis | Continues to improve despite loss of several weeks treatment because of typhoid fever |
| None<br><br>Good | 7- 7-42 | 1,250,000 | | None | None | No arthritic pains at present. Good results | |
| Slight<br><br>None<br>Nausea<br>Imp. (temporary) | 4-28-43 | 1,250,000 | | None | None | Slow improvement on parenteral Ertron alone. Unable to tolerate oral Ertron. Has gained about 20 pounds | Teaches piano lessons 4 hours each day |

## Conclusions

1. Electrically activated vaporized ergosterol (Ertron) when administered orally in dosages of 150,000 units daily, combined with single weekly intramuscular injections of Ertron parenteral, has been found to be an effective and safe form of antiarthritic therapy.

2. No serious toxic manifestations were encountered with the exception of slight nausea or heart burn, or frequent micturition, which promptly disappeared when the dosage of oral Ertron was reduced or suspended temporarily for seven to ten days.

3. The combination of oral and intramuscular forms of electrically activated vaporized ergosterol is the most satisfactory method of treatment as the patient can be kept under better observation when seen once

CHART II.

I. LABORATORY OBSERVATIONS FOLLOWING MEDICATION: { Ertron Parenteral: 1,250,000 units weekly / Ertron—Oral: 3 capsules per day } { All comb. pts. / See * for exceptions }

| Case No. and Date Put on Comb. | Remarks | Dates of Lab. Tests | N. P. N. | Sugar | Uric Acid | Calcium |
|---|---|---|---|---|---|---|
| I R 243 | *1,500,000 units weekly. | 8–11–43 | 43 mg. | 107 mg. | 3.7 mg. | 11.0 mg. |
| | | 2–23–44 | 30 mg. | 79 mg. | 5.4 mg. | 11.0 mg. |
| 8–11–43 | Former Ertron Parenteral pt. | 8– 9–44 | 40 mg. | 107 mg. | 5.0 mg. | 11.0 mg. |
| II N 67 | Away 6–44 to 11–44. | 6–16–43 | 28 mg. | 88 mg. | 2.5 mg. | 10.8 mg. |
| | Injections given by private doctor. Former Ertron | 12–15–43 | 24 mg. | 93 mg. | 2.5 mg. | 10.0 mg. |
| 7–28–43 | Parenteral pt. | 12–27–44 | 29 mg. | 100 mg. | 2.5 mg. | 10.0 mg. |
| III S 594 | | 7–21–43 | 21 mg. | 88 mg. | 4.3 mg. | 9.0 mg. |
| | | 1–19–44 | 27 mg. | 93 mg. | 3.7 mg. | 10.0 mg. |
| 8–11–43 | | 8– 9–44 | 30 mg. | 88 mg. | 4.7 mg. | 9.5 mg. |
| IV B 371 | | 8– 4–43 | 39 mg. | 107 mg. | 3.7 mg. | 9.6 mg. |
| | | 3– 1–44 | 24 mg. | 100 mg. | 2.7 mg. | 10.0 mg. |
| 8–18–43 | | 9–20–44 | 30 mg. | 75 mg. | 2.9 mg. | 10.5 mg. |
| V G 375 | | 7–20–43 | 22 mg. | 107 mg. | 2.7 mg. | 9.3 mg. |
| | | 1–26–44 | 28 mg. | 93 mg. | 3.7 mg. | 10.4 mg. |
| 8–18–43 | | 7–19–44 | 39 mg. | 96 mg. | 3.4 mg. | 9.5 mg. |
| VI T 123 | Former Ertron Parenteral pt. | 4–26–43 | 35 mg. | 100 mg. | 2.5 mg. | 10.0 mg. |
| | | 10–13–43 | 20 mg. | 115 mg. | 3.7 mg. | 9.8 mg. |
| 8–18–43 | | 4–12–44 | 30 mg. | 115 mg. | 3.4 mg. | 10.0 mg. |
| VII D 156 | Former Ertron Parenteral pt. | 4–28–43 | 30 mg. | 100 mg. | 6.3 mg. | 11.6 mg. |
| | | 10– 5–43 | 33 mg. | 115 mg. | 2.1 mg. | 11.2 mg. |
| 8–31–43 | | 4–11–44 | 30 mg. | 100 mg. | 6.3 mg. | 14.5 mg. |
| | | 7–12–44 | | | | 12.5 mg. |
| VIII K 310 | Former Ertron Parenteral pt. | 9– 8–43 | 40 mg. | 100 mg. | 3.4 mg. | 13.0 mg. |
| | | 3–22–43 | 25 mg. | 115 mg. | 7.5 mg. | 14.0 mg. |
| 9–28–43 | | 9–20–44 | 30 mg. | 107 mg. | 3.4 mg. | 12.5 mg. |
| IX S 594 | | 8–25–43 | 25 mg. | 100 mg. | 4.7 mg. | 9.0 mg. |
| | | 2– 9–44 | 20 mg. | 115 mg. | 5.4 mg. | 10.0 mg. |
| 9– 1–43 | | 8–29–44 | 35 mg. | 100 mg. | 5.4 mg. | 10.0 mg. |
| X K 289 | Former Ertron Parenteral pt. | 9– 8–43 | 21 mg. | 100 mg. | 3.7 mg | 11.2 mg. |
| | | 5–10–44 | 60 mg. | 125 mg. | 6.3 mg. | 10.5 mg. |
| 9– 8–43 | | 11– 8–44 | 30 mg. | 80 mg. | 6.3 mg. | 11.4 mg. |
| XI S 457 | | 9–22–43 | 24 mg. | 93 mg. | 2.9 mg. | 10.5 mg. |
| | | 3–22–44 | 21 mg. | 100 mg. | 4.7 mg. | 10.0 mg. |
| 9–22–43 | | 9–27–44 | 24 mg. | 100 mg. | 3.9 mg. | 10.5 mg. |
| XII W 230 | | 9–17–43 | 29 mg. | 107 mg. | 3.1 mg. | 10.0 mg. |
| | | 5–17–44 | 21 mg. | 100 mg. | 4.7 mg. | 9.5 mg. |
| 9–28–43 | | 11– 1–44 | 27 mg. | 115 mg. | 3.4 mg. | 10.0 mg. |
| XIII S 578 | Former Ertron Parenteral pt. | 9–15–43 | 23 mg. | 115 mg. | 1.8 mg. | 11.8 mg. |
| | | 4–19–44 | 27 mg. | 93 mg. | 2.5 mg. | 11.3 mg. |
| 9–21–43 | | 10–11–44 | 28 mg. | 100 mg. | 2.3 mg. | 10.0 mg. |
| XIV D 205 | | 9–28–43 | 25 mg. | 94 mg. | 3.1 mg. | 9.4 mg. |
| | | 3–29–44 | 24 mg. | 93 mg. | 3.7 mg. | 10.0 mg. |
| 10– 5–43 | | 9–27–44 | 33 mg. | 115 mg. | 4.2 mg. | 9.5 mg. |
| XV R 260 | | 6–16–43 | 50 mg. | 115 mg. | 5.4 mg. | 10.9 mg. |
| | | 12–29–43 | 33 mg. | 125 mg. | 3.4 mg. | 9.4 mg. |
| 10–20–43 | | 6–14–44 | 60 mg. | 115 mg. | 5.4 mg. | 12.0 mg. |
| XVI B 384 | | 10– 6–43 | 50 mg. | 125 mg. | 6.3 mg. | 14.8 mg. |
| | | 4–26–44 | 60 mg. | 107 mg. | 5.9 mg. | 13.1 mg. |
| 10– 6–43 | | 10–11–44 | 50 mg. | 150 mg. | 5.4 mg. | 13.0 mg. |
| XVII L 307 | *1,000,000 units weekly. | 10–20–43 | 17 mg. | 79 mg. | 3.1 mg. | 11.0 mg. |
| | | 4–19–44 | 20 mg. | 93 mg. | 3.1 mg. | 12.2 mg. |
| 10–26–43 | | 11– 1–44 | 25 mg. | 107 mg. | 4.7 mg. | 11.0 mg. |
| XVIII C 239 | Former Ertron Parenteral pt. | 8–25–43 | 22 mg. | 88 mg. | 3.4 mg. | 9.0 mg. |
| | | 2– 9–44 | 26 mg. | 93 mg. | 3.1 mg. | 10.4 mg. |
| 10–27–43 | | 9–20–44 | 32 mg. | 93 mg. | 3.7 mg. | 10.9 mg. |
| XIX D 49 | *500,000 units weekly. | 7–27–43 | 29 mg. | 107 mg. | 3.1 mg. | 10.0 mg. |
| | Former Ertron Parenteral pt. | 1–12–44 | 46 mg. | 100 mg. | 4.2 mg. | 12.0 mg. |
| 10–26–43 | | 8–23–44 | 60 mg. | 115 mg. | 6.3 mg. | 12.0 mg. |
| | | 11– 1–44 | | | | 10.5 mg. |
| XX A 161 | Former Ertron Parenteral pt. | 11– 3–43 | 30 mg. | 136 mg. | 3.4 mg. | 10.5 mg. |
| | | 6–21–44 | 24 mg. | 93 mg. | 3.7 mg. | 9.7 mg. |
| 11– 3–43 | | 11– 1–44 | 30 mg. | 115 mg. | 2.9 mg. | 10.0 mg. |
| XXI W 212 | Former Ertron Parenteral pt. | 10–13–43 | 27 mg. | 107 mg. | 2.9 mg. | 10.8 mg. |
| | | 4–19–44 | 27 mg. | 100 mg. | 3.7 mg. | 10.0 mg. |
| 10–15–43 | | 10–25–44 | 22 mg. | 115 mg. | 5.1 mg. | 12.7 mg. |
| XXII M 360 | | 11–16–43 | 22 mg. | 100 mg. | 3.1 mg. | 9.0 mg. |
| | | 5–24–44 | 24 mg. | 83 mg. | 3.2 mg. | 11.0 mg. |
| 11–24–43 | | 12–12–44 | 20 mg. | 88 mg. | 1.5 mg. | 9.5 mg. |
| XXIII L 301 | | 12–15–43 | 22 mg. | 100 mg. | 3.9 mg. | 9.3 mg. |
| | | 6–14–44 | 25 mg. | 83 mg. | 3.8 mg. | 10.0 mg. |
| 12–15–43 | | 9–13–44 | 20 mg. | 107 mg. | 3.4 mg. | 9.5 mg. |
| XXIV K 322 | | 11–26–43 | 22 mg. | 107 mg. | 1.9 mg. | 9.3 mg. |
| | | 5–10–44 | 30 mg. | 115 mg. | 3.4 mg. | 10.0 mg. |
| 12–29–43 | | 12–20–44 | 50 mg. | 115 mg. | 3.4 mg. | 10.7 mg. |
| XXV C 316 | | 2–11–44 | 20 mg. | 93 mg. | 4.2 mg. | 15.5 mg. |
| 2–23–44 | | 8–23–44 | 26 mg. | 107 mg. | 3.7 mg. | 10.0 mg. |
| XXVI S 273 | *1,000,000 units—No intervening bloods from 1–21–41 to | 1–21–41 | 35 mg. | 115 mg. | 4.2 mg. | 10.5 mg. |
| | 3–2–43. Former Ertron pt. | 3– 2–43 | 25 mg. | 115 mg. | 5.4 mg. | 11.8 mg. |
| 7–15–42 | | 10–20–43 | 33 mg. | 100 mg. | 4.2 mg. | 10.0 mg. |
| | | 10–24–44 | 30 mg. | 125 mg. | 4.7 mg. | 10.5 mg. |
| XXVII C 273 | 1,250,000 units. | 9– 8–42 | 35 mg. | 103 mg. | 4.7 mg. | 9.1 mg. |
| | Former Ertron and Viosterol (Ultraviolet Irradiated | 5–12–43 | 29 mg. | 103 mg. | 2.3 mg. | 9.2 mg. |
| 4–28–43 | Ergosterol) patient. Unable to tolerate either Ertron or | 11–17–43 | 20 mg. | 107 mg. | 3.1 mg. | 10.0 mg. |
| | Viosterol (Ultraviolet Irradiated Ergosterol) orally. | 9–20–44 | 37 mg. | 125 mg. | 3.1 mg. | 10.5 mg. |
| XXVIII R 252 | 1,250,000 units. | 5–14–41 | 32 mg. | 107 mg. | 3.7 mg. | 10.0 mg. |
| | Put on comb. 5–10–44. | 11–25–42 | | | | 11.0 mg. |
| 5–13–43 | | 6–16–43 | 30 mg. | 93 mg. | 4.2 mg. | 10.0 mg. |
| | | 12–22–43 | 30 mg. | 107 mg. | 5.4 mg. | 10.0 mg. |
| | | 10– 4–44 | | | | |
| XXIX T 105 | 1,250,000 units. | 5–14–41 | 50 mg. | 125 mg. | 2.9 mg. | 12.3 mg. |
| | No intervening bloods from 5–14–41 to 6–30–43. | 6–30–43 | 25 mg. | 125 mg. | 2.0 mg. | 8.6 mg. |
| 7– 7–42 | | 12– 8–43 | 20 mg. | 125 mg. | 2.7 mg. | 10.7 mg. |

weekly. Also, if unpleasant symptoms arise on full oral dosages, the patient can be treated temporarily with Ertron parenteral alone so that there is no interruption in this therapy.

## References


1. SNYDER, R. G., SQUIRES, W. H., FORSTER, J. W., and RUDD, E.: *Industrial Medicine*, 12:8, 663, August, 1943.
2. SNYDER, R. G., SQUIRES, W. H., FORSTER, J. W., TRAEGER, C. H., and WAGNER, L. C.: *New York State J. Med.*, 40:708, 1940; *ibid.*, 41:2332, 1941; *Industrial Medicine*, 11:7, 295, July, 1942; *ibid.*, 12:5, 291, May, 1943.
3. LIVINGSTON S. K.: *Arch. Phys. Therapy*, 17: 704, 1936.
4. FARLEY, R. T.: *Illinois Med. J.*, 71:74, 1937; *J. Am. Inst. Homeop.*, 31:405, 1938; *Journal Lancet*, 59:401, 1939; *Industrial Medicine*, 10:8, 341, August, 1941.
5. REED, C. I., STRUCK, H. G., and STECK, I. E.: Vitamin D—Chemistry, Physiology, Pharmacology, Pathology, Experimental and Clinical Investigations. University of Chicago Press, 1939, p. 389.
6. STECK, I. E.: *Ohio State Med. J.*, 38:440, 1942.
7. LEVINTHAL, D. H., et al.: *J. Lancet*, 63:48, 1943; *Industrial Medicine*, 13:5, 377, May, 1944.
8. MCCHESNEY, E. W.: *J. Nutrit.*, 26:487, 1943.


## CHART II.

I. LABORATORY OBSERVATIONS FOLLOWING MEDICATION: {Ertron Parenteral: 1,250,000 units weekly / Ertron—Oral: 3 capsules per day} {All comb. pts. / See * for exceptions}

| Phosphorus | Hb. Gms. | Hb. % | R. B. C. | W. B. C. | Polys. | Lymphs. | Mono. | Eosin. | Sed. Rate | Kline |
|---|---|---|---|---|---|---|---|---|---|---|
| 3.43 mg. | | 88% | 4,700,000 | 5,000 | 64% | 34% | 2% | | 43 mm/1 hr. | Neg. |
| 3.09 mg. | 14.5 | 100% | 4,510,000 | 5,600 | 66% | 33% | 1% | | 28 mm/1 hr. | Neg. |
| 2.45 mg. | 14.5 | 100% | 4,660,000 | 5,600 | 64% | 30% | 4% | 2% | 10 mm/1 hr. | Neg. |
| 5.47 mg. | | 68% | 3,940,000 | 6,250 | 66% | 34% | | | 92 mm/1 hr. | Neg. |
| 3.63 mg. | 12.1 | 84% | 4,300,000 | 9,650 | 83% | 15% | | 2% | 65 mm/1 hr. | Neg. |
| 3.63 mg. | 11.6 | 80% | 4,180,000 | 6,000 | 72% | 26% | | 2% | 33 mm/1 hr. | Neg. |
| 4.10 mg. | | 88% | 4,510,000 | 6,500 | 66% | 32% | | 2% | 25 mm/1 hr. | Neg. |
| 3.63 mg. | 14.5 | 100% | 4,480,000 | 6,500 | 69% | 27% | | 4% | 55 mm/1 hr. | Neg. |
| 3.64 mg. | 13.6 | 96% | 4,270,000 | 7,200 | 60% | 35% | 2% | 3% | 25 mm/1 hr. | Neg. |
| 4.20 mg. | | 85% | 4,280,000 | 8,000 | 71% | 27% | | 2% | 50 mm/1 hr. | Neg. |
| 3.63 mg. | 12.3 | 85% | 4,310,000 | 13,800 | 77% | 20% | | 3% | 60 mm/1 hr. | Neg. |
| 4.10 mg. | 13.1 | 90% | 4,200,000 | 10,000 | 70% | 30% | | | 40 mm/1 hr. | Neg. |
| 3.85 mg. | | 70% | 4,010,000 | 6,350 | 66% | 32% | | Baso 2% | 32 mm/1 hr. | Neg. |
| 3.25 mg. | 11.6 | 80% | 4,000,000 | 8,300 | 70% | 30% | | | 43 mm/1 hr. | Neg. |
| 3.25 mg. | 13.1 | 90% | 4,400,000 | 5,950 | 65% | 32% | 3% | | 74 mm/1 hr. | Neg. |
| 3.55 mg. | | 82% | 4,240,000 | 6,650 | 64% | 35% | 1% | | 20 mm/1 hr. | Neg. |
| 3.43 mg. | | 80% | 4,340,000 | 5,000 | 74% | 24% | 1% | 1% | 30 mm/1 hr. | Neg. |
| 3.43 mg. | 13.1 | 90% | 4,410,000 | 6,500 | 71% | 29% | | | 49 mm/1 hr. | Neg. |
| 2.22 mg. | | 78% | 4,570,000 | 6,700 | 68% | 30% | 2% | | 65 mm/1 hr. | Neg. |
| 3.71 mg. | | 78% | 3,820,000 | 7,600 | 81% | 17% | | 2% | 43 mm/1 hr. | Neg. |
| 3.76 mg. | 12.3 | 85% | 4,180,000 | 10,000 | 71% | 28% | 1% | | 75 mm/1 hr. | Neg. |
| | | | | | | | | | 70 mm/1 hr. | Neg. |
| 4.10 mg. | | 75% | 4,160,000 | 9,300 | 48% | 49% | | 3% | 40 mm/1 hr. | Neg. |
| 3.09 mg. | 11.6 | 80% | 4,000,000 | 8,000 | 54% | 44% | Slight achroma | 2% | 110 mm/1 hr. | Neg. |
| 3.63 mg. | 12.3 | 85% | 3,420,000 | 8,500 | 66% | 33% | | 1% | 115 mm/1 hr. | Neg. |
| 2.60 mg. | | 98% | 4,690,000 | 7,500 | 70% | 28% | | 2% | 49 mm/1 hr. | Neg. |
| 2.06 mg. | 13.1 | 90% | 4,380,000 | 6,000 | 69% | 25% | | 6% | 35 mm/1 hr. | Neg. |
| 2.36 mg. | 14. | 99% | 4,490,000 | 8,250 | 67% | 29% | 2% | 2% | 20 mm/1 hr. | Neg. |
| 4.1 mg. | | 84% | 4,090,000 | 7,500 | 77% | 20% | 3% | | 77 mm/1 hr. | Neg. |
| 2.8 mg. | 13.8 | 96% | 4,480,000 | 6,400 | 56% | 38% | 4% | 2% | 50 mm/1 hr. | Neg. |
| 3.25 mg. | 13. | 92% | 4,000,000 | 5,800 | 72% | 28% | | | 66 mm/1 hr. | Neg. |
| 3.63 mg. | | 80% | 4,400,000 | 7,600 | 64% | 35% | | 1% | 70 mm/1 hr. | Neg. |
| 4.10 mg. | 12.3 | 85% | 4,200,000 | 13,600 | 61% | 33% | | 6% | 25 mm/1 hr. | Neg. |
| 3.63 mg. | 13.1 | 90% | 4,000,000 | 6,800 | 54% | 44% | 1% | 1% | 25 mm/1 hr. | Neg. |
| 3.85 mg. | | 83% | 4,200,000 | 9,200 | 50% | 43% | Baso 2% | 5% | 22 mm/1 hr. | Neg. |
| 3.45 mg. | 14. | 98% | 4,030,000 | 6,250 | 70% | 29% | | 1% | 34 mm/1 hr. | Neg. |
| 2.56 mg. | 12.3 | 85% | 4,400,000 | 8,000 | 71% | 27% | 1% | 1% | 37 mm/1 hr. | Neg. |
| 4.76 mg. | | 82% | 4,510,000 | 6,100 | 72% | 27% | 1% | | 53 mm/1 hr. | Neg. |
| 4.38 mg. | 12.3 | 85% | 4,030,000 | 8,600 | 65% | 33% | 2% | | 70 mm/1 hr. | Neg. |
| 3.85 mg. | 12.3 | 85% | 4,160,000 | 7,200 | 66% | 34% | | | 92 mm/1 hr. | Neg. |
| 3.43 mg. | | 90% | 4,680,000 | 8,000 | 56% | 39% | | 5% | 24 mm/1 hr. | Neg. |
| 3.85 mg. | 14. | 95% | 4,180,000 | 5,400 | 68% | 31% | | 1% | 16 mm/1 hr. | Neg. |
| 3.09 mg. | 12.3 | 85% | 4,090,000 | 7,500 | 58% | 41% | | 1% | 17 mm/1 hr. | Neg. |
| 3.43 mg. | | 70% | 3,750,000 | 8,350 | 61% | 36% | 2% | 1% | 45 mm/1 hr. | Neg. |
| 3.09 mg. | 13.1 | 90% | 4,300,000 | 5,500 | 62% | 36% | | 2% | 32 mm/1 hr. | Neg. |
| 4.38 mg. | 13.1 | 90% | 3,640,000 | 5,300 | 62% | 36% | 1% | 1% | 43 mm/1 hr. | Neg. |
| 4.69 mg. | | 76% | 3,690,000 | 11,100 | 80% | 18% | 1% | 1% | 105 mm/1 hr. | Neg. |
| 4.10 mg. | 10.1 | 70% | 3,680,000 | 17,000 | 82% | 18% | | | 96 mm/1 hr. | Neg. |
| 4.0 mg. | 11.6 | 80% | 3,900,000 | 9,250 | 71% | 27% | | 2% | 80 mm/1 hr. | Neg. |
| 5.47 mg. | | 88% | 4,470,000 | 9,100 | 66% | 32% | 1% | 1% | 20 mm/1 hr. | Neg. |
| 4.56 mg. | 13.1 | 90% | 4,610,000 | 8,800 | 45% | 53% | 1% | 1% | 12 mm/1 hr. | Neg. |
| 4.38 mg. | 14.5 | 100% | 4,420,000 | 5,900 | 41% | 57% | 1% | 1% | 9 mm/1 hr. | Neg. |
| 2.45 mg. | | 80% | 4,430,000 | 6,850 | 61% | 39% | | | 27 mm/1 hr. | Neg. |
| 3.63 mg. | 13.1 | 90% | 4,350,000 | 8,000 | 67% | 27% | | 6% | 19 mm/1 hr. | Neg. |
| 3.63 mg. | 12.3 | 85% | 4,200,000 | 5,500 | 58% | 40% | | 2% | 50 mm/1 hr. | Neg. |
| 3.85 mg. | | 83% | 4,200,000 | 9,200 | 50% | 43% | Baso 2% | 5% | 90 mm/1 hr. | Neg. |
| 3.51 mg. | 11.6 | 80% | 4,410,000 | 7,200 | 67% | 33% | | | 66 mm/1 hr. | Neg. |
| 3.85 mg. | 14.5 | 100% | 4,480,000 | 6,500 | 64% | 35% | | 1% | 95 mm/1 hr. | Neg. |
| | | | | | | | | | 60 mm/1 hr. | Neg. |
| N. S. B. | | 85% | 4,200,000 | 5,800 | 57% | 39% | | 4% | 36 mm/1 hr. | Neg. |
| 2.68 mg. | 13.1 | 90% | 4,630,000 | 6,550 | 54% | 40% | 4% | 2% | 12 mm/1 hr. | Neg. |
| 2.80 mg. | 12.3 | 85% | 4,200,000 | 7,100 | 62% | 33% | 1% | 4% | 55 mm/1 hr. | Neg. |
| 3.09 mg. | | 82% | 4,370,000 | 7,000 | 54% | 42% | 2% | 2% | 42 mm/1 hr. | Neg. |
| 3.63 mg. | 12.3 | 85% | 4,000,000 | 5,500 | 46% | 50% | 1% | 3% | 23 mm/1 hr. | Neg. |
| 3.25 mg. | 11.6 | 80% | 3,570,000 | 5,300 | 42% | 53% | 2% | Baso 1-2% | 55 mm/1 hr. | Neg. |
| 3.63 mg. | | 90% | 4,600,000 | 6,000 | 68% | 30% | 1% | 1% | 46 mm/1 hr. | Neg. |
| 3.63 mg. | 12.3 | 85% | 3,950,000 | 5,000 | 67% | 33% | | | 47 mm/1 hr. | Neg. |
| 3.25 mg. | 12.3 | 85% | 4,100,000 | 8,000 | 61% | 38% | | 1% | 73 mm/1 hr. | Neg. |
| 3.63 mg. | 13.8 | 95% | 4,410,000 | 8,300 | 74% | 25% | | 1% | 80 mm/1 hr. | Neg. |
| 3.43 mg. | 13.8 | 95% | 4,090,000 | 10,600 | 61% | 37% | | 2% | 62 mm/1 hr. | Neg. |
| 3.43 mg. | 13.1 | 90% | 4,680,000 | 10,200 | 66% | 33% | | 1% | 61 mm/1 hr. | Neg. |
| 3.63 mg. | | 96% | 4,860,000 | 8,650 | 58% | 35% | 5% | 2% | 42 mm/1 hr. | Neg. |
| 3.25 mg. | 11.6 | 80% | 4,410,000 | 5,000 | 58% | 40% | | 2% | 70 mm/1 hr. | Neg. |
| 3.63 mg. | 13.1 | 90% | 4,300,000 | 6,000 | 51% | 46% | | 3% | 65 mm/1 hr. | Neg. |
| 4.1 mg. | 13.1 | 90% | 4,580,000 | 9,000 | 55% | 45% | | | 45 mm/1 hr. | Neg. |
| 3.43 mg. | 13.8 | 95% | 4,420,000 | 6,900 | 61% | 39% | | | 20 mm/1 hr. | Neg. |
| 2.10 mg. | | 87% | 4,320,000 | 7,300 | 61% | 37% | 1% | 1% | 14 mm/1 hr. | Neg. |
| 3.09 mg. | | 86% | 4,680,000 | 7,000 | 47% | 52% | 1% | | 95 mm/1 hr. | Neg. |
| 2.80 mg. | | 80 | 4,180,000 | 6,000 | 79% | 21% | | | 66 mm/1 hr. | Neg. |
| 2.68 mg. | | 93% | 4,750,000 | 5,600 | 67% | 32% | 1% | | 45 mm/1 hr. | Neg. |
| 5.06 mg. | | 65% | 3,350,000 | 7,600 | 72% | 27% | | 1% | 137 mm/1 hr. | Neg. |
| 3.63 mg. | | 77% | 3,392,000 | 9,500 | 68% | 29% | 1% | 2% | 115 mm/1 hr. | Neg. |
| 4.38 mg. | | 84% | 4,680,000 | 8,700 | 74% | 26% | | | 105 mm/1 hr. | Neg. |
| 4.38 mg. | | 80% | 4,000,000 | 5,600 | 80% | 18% | | 2% | 112 mm/1 hr. | Neg. |
| 3.25 mg. | | 90% | 4,440,000 | 7,700 | 40% | 59% | | 1% | 53 mm/1 hr. | Neg. |
| | | 90% | 4,420,000 | 6,500 | 47% | 52% | | 1% | | Neg. |
| 3.43 mg. | | 70% | 3,850,000 | 5,350 | 58% | 42% | | | 62 mm/1 hr. | Neg. |
| 3.43 mg. | | 80% | 4,000,000 | 6,100 | 51% | 48% | | 1% | 30 mm/1 hr. | Neg. |
| 3.22 mg. | | 84% | 4,340,000 | 6,500 | 61% | 39% | | | 39 mm/1 hr. | Neg. |
| 3.63 mg. | | 82% | 4,310,000 | 6,050 | 63% | 37% | | | 27 mm/1 hr. | Neg. |
| 4.30 mg. | | 85% | 4,260,000 | 6,100 | 46% | 50% | 1% | 3% | 26 mm/1 hr. | Neg. |

## GENERAL

—*Continued from page 20.*

with other research institutions, universities and nationally recognized consultants; and, *post-war*, (6) part-time medical or nurse service in which "medical ethics will be maintained, and in no instance will service be offered to those plants already employing their own doctor and/or nurse." The Foundation's announcement to "western industry" includes the following regarding the professional executive staff: "DR. C. E. EARLY, *Executive Director:* Having spent his entire professional career in the field of industrial medicine, DR. EARLY has achieved recognition as one of the West's outstanding traumatic surgeons. Not content with developing a purely surgical practice and envisioning even before World War I the future scope of industrial health, he pioneered an industrial medical clinic not only unique in the type of service it offered the workman but also one of the first of its kind in this country. DR. EARLY brings to the Pacific Industrial Hygiene and Research Foundation an executive and professional ability born of long years of experience. DR. RUTHERFORD T. JOHNSTONE, *Managing Director:* Coming to the Golden State Hospital in 1936, DR. JOHNSTONE developed the department of Occupational Diseases, a specialty previously given little recognition in American medicine. He is the author of the only textbook of its type, "Occupational Diseases"; is Associate Editor of INDUSTRIAL MEDICINE; co-author of two special publications in this field; frequent contributor to the medical literature; and, in turn, Secretary and President of the Western Association of Industrial Physicians and Surgeons. DR. HUGH DIERKER, *Research and Hygiene Director:* Immediately after finishing medical school, Dr. Dierker took a post-graduate course in industrial hygiene at Yale University. He then associated himself with several well-known authorities in the field of industrial toxicology before coming to Los Angeles to become Director of the Department of Industrial Hygiene of Los Angeles County. Because of the war, he has had both an intensive and extensive experience with the problems of industrial hygiene. DR. DIERKER will be ably assisted in his research work by MR. PAUL BROWN, an industrial chemist of wide experience, and who had special training with the U. S. Public Health Service, Division of Industrial Hygiene, at Bethesda, Maryland. DR. CAREY MCCORD, Detroit, Michigan, *Consultant:* Nationally and internationally known in the fields of industrial medicine and industrial toxicology, DR. MCCORD offers to the Pacific Industrial Hygiene and Research Foundation the best practical and experimental advice to be found in this country. His own Industrial Health Conservancy Laboratories have solved many of the most perplexing health problems relating to old and newly contemplated industrial processes."

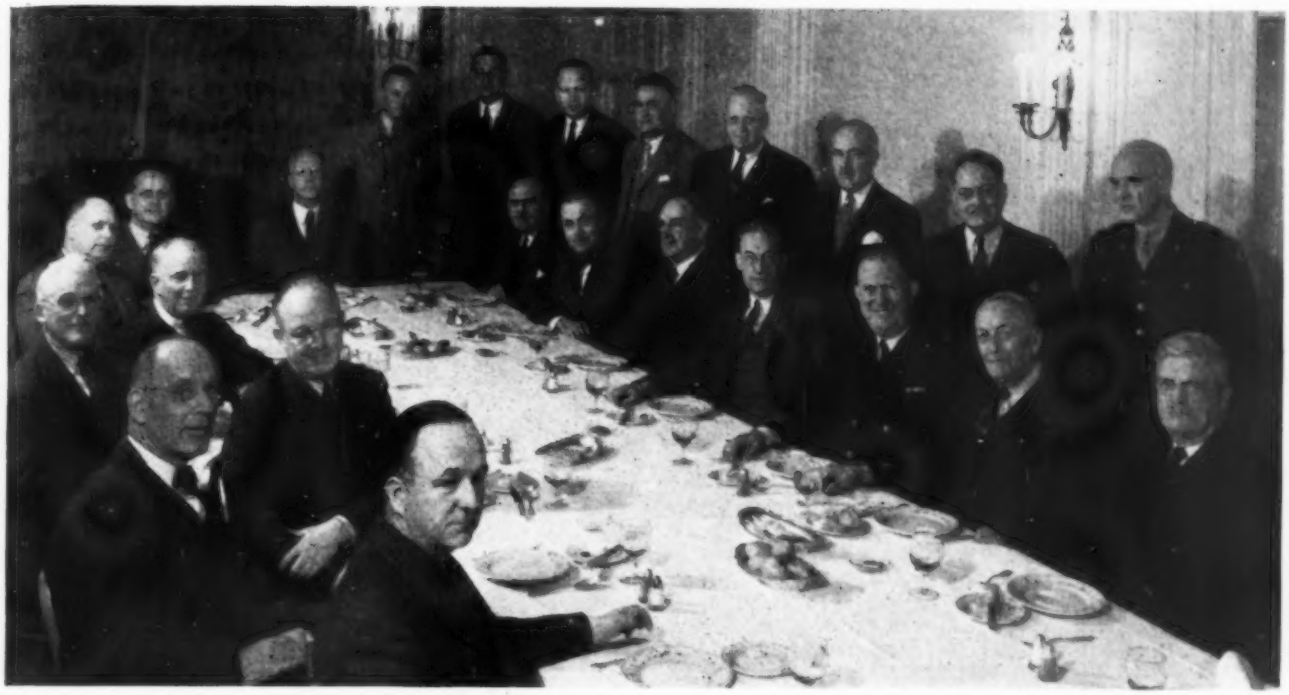
### Dr. Hussey

DR. RAYMOND HUSSEY'S move from the Army Industrial Hygiene Laboratory, at Baltimore, to Wayne University Medical Science Center, as described in *J.A.M.A.*, February 17, is noted on page 8. The following is the comment of the *Baltimore Evening Sun* of February 10, in an article by Harry S. Sherwood: "A school of occupational health, the first of its kind in this country, will be started in Detroit in the immediate future with a Baltimore man in charge of the organization work. The Baltimorean is DR. RAYMOND HUSSEY, who organized the Army Industrial Hygiene Laboratory here in January, 1942, and has been in charge of it since, latterly with the rank of Lieutenant Colonel. The Detroit institution is to be a graduate school designed to train physicians and engineers in all phases of health as it is related to occupations, and is to conduct research in the same field. This special branch of preventive engineering has been discussed for a decade or more and industrialists and groups of physicians, including the American Medical Association, have given it much attention. The new school is described as the first effort to unite the body of knowledge on the subject in a school. The health of the worker, from the employee in the shop to the executive, will be studied, with the emphasis on the creation of conditions conducive to health rather than on the treatment of disease after it occurs. DR. HUSSEY will have charge of the assembling of the faculty and the development of a curriculum. Detroit industrialists will finance the new institution and its location in Detroit is regarded as important because of the industrial importance of that city. The new school will cover such aspects of preventive medicine applied to industry as the air breathed in plant or office, the gases and chemicals with which the worker comes in contact; mechanical hazards; administration; social and economic matters, such as insurance; fatigue; the capacity for individual workers to do a particular job, the latter including the proper placing of the worker; and the other subjects to be developed later. The objective of the new science will be to place a healthy worker in a healthful job. Work of the same general nature as that with which the new school will deal has been done for all army-owned or army-operated industrial plants since the Army Industrial Hygiene Laboratory was established two years ago. DR. HUSSEY organized this and now has a large force. He is leaving the Army to take his new position. The doctor has worked in this field for years. A native of North Carolina, he took his degree in medicine at the University of Maryland Medical School in 1911 and for two years was resident physician of the Maryland Tuberculosis Sanatorium. He was a member of the faculty of pathology of Johns Hopkins from 1914 to 1917. In 1917 he entered the Army Medical Corps and went to France, where he was identified with the laboratory of infectious diseases. Returning to this country in 1919, he was associated with the Rockefeller Institute for Medical Research until 1922. He served for a time as assistant professor of pathology at Cornell Medical School, and from 1924 to 1934 he was professor of pathology at Yale. In 1937, he became a member of the faculties of the University of Maryland and the Johns Hopkins medical schools."

## TWENTY-FIVE YEARS AGO

FROM the pages of *Health News*, we quote the following article published 25 years ago. The views expressed are as sound today as when they were first written and have an historic interest in an era when industrial management and personnel are making a more concerted effort than ever to promote the objectives outlined. "Conservation of the health of industrial workers, often scorned in the past as an experiment or a fad by both employers and employees, is today recognized by both as of the utmost importance. To the employee it means higher physical tone, less time lost through sickness and disability, better working conditions and incidentally through these factors, a greater income. To the employer, it means increased production, greatly lessened labor turnover, and a mutual understanding between capital and labor. With the present labor scarcity and high cost of living, industrial health measures are a factor neither side can afford to neglect. The field of industrial health conservation, once limited largely to first aid and the reduction of industrial hazards, is now conceded to include all matters which conduce to the physical, mental, as well as the moral welfare of the employee during working hours. It should include a medical examination of all applicants for employment, the removal of remediable defects and the mental and physical adjustment of the man to his job. No less important, though often overlooked, is the preparation of, or provision for, the right kind of food, properly cooked and served, and suitable recreational and educational facilities. Successful health conservation in industry can only be achieved by a form of self-government, neither paternalistic nor socialistic, but administered through the intelligent cooperation of executive and worker and for the best interests of both."

—*Health News*, New York State Department of Labor, January 22, 1945.



Dr. Anthony J. Lanza (Head of Table). Beginning at Dr. Lanza's RIGHT—Dr. Carl M. Peterson; Dr. Edward C. Holmblad; Dr. Loyal Shoudy; Dr. C. D. Selby; Dr. William A. Sawyer; Dr. LeRoy U. Gardner; Dr. Stanley J. Seeger. Beginning at Dr. Lanza's LEFT—(Standing) Dr. F. E. Poole; Dr. Frederick W. Slobe; Dr. Melvin N. Newquist; Dr. Richard P. Bell; Dr. A. H. Whittaker; Dr. Edward P. Heller; Dr. C. O. Sappington; Lieut. Colonel Raymond Hussey. Beginning at Dr. Lanza's LEFT—(Seated) Dr. Roscoe L. Sensenich; Dr. R. F. Kurz; Dr. Harvey Bartle; Dr. Henry S. Brown; Captain Henry H. Kessler; Dr. Otto P. Geier; Dr. Don B. Lowe

## Industrial Medical Practice Looks Ahead

*—Leaders Meet in Chicago—*

THE COUNCIL ON INDUSTRIAL HEALTH of the American Medical Association, at a dinner at the Drake Hotel, Chicago, on Monday, February 12, 1945, was host to a group of outstanding industrial physicians and surgeons representative of those who have made important contributions to the field of industrial health both as individuals and through their identifications with the AMERICAN ASSOCIATION OF INDUSTRIAL PHYSICIANS AND SURGEONS. The occasion was a meeting of the Association's Board of Directors, and the principal purpose was to compare notes as to industrial medical objectives currently under consideration by the Association and the Council, and ways in which the two groups could be mutually helpful. Present (in the order of their listing under the photograph) were the following:

DR. ANTHONY J. LANZA, Assistant Medical Director, Metropolitan Life Insurance Company; Member, A.M.A. Council on Industrial Health.

DR. CARL M. PETERSON, Secretary, A.M.A. Council on Industrial Health.

DR. EDWARD C. HOLMBLAD, Railway Express Agency; Managing Director, American Association of Industrial Physicians and Surgeons.

DR. LOYAL A. SHOUDY, Bethlehem Steel Company; First Vice-President, American Association of Industrial Physicians and Surgeons.

DR. C. D. SELBY, General Motors Corporation; Member, A.M.A. Council on Industrial Health.

DR. WILLIAM A. SAWYER, Eastman Kodak Company; Director, American Association of Industrial Physicians and Surgeons, Member, A.M.A. Council on Industrial Health.

DR. LEROY U. GARDNER, Saranac Laboratory; Member, A.M.A. Council on Industrial Health.

DR. STANLEY J. SEEGER, Chairman, A.M.A. Council on Industrial Health.

DR. ROSCOE L. SENSENICH, Member, A.M.A. Board of Trustees; Ex-officio Member, A.M.A. Council on Industrial Health.

DR. R. F. KURZ, Emerson Electric & Manufacturing Company; Director, American Association of Industrial Physicians and Surgeons.

DR. HARVEY BARTLE, Pennsylvania Railroad; Member, A.M.A. Council on Industrial Health.

DR. HENRY S. BROWN, Michigan Bell Telephone Company; Member, American Association of Industrial Physicians and Surgeons.

CAPTAIN HENRY H. KESSLER, USN, Member, A.M.A. Council on Industrial Health.

DR. OTTO P. GEIER, Cincinnati Milling Machine Company; Past-President, American Association of Industrial Physicians and Surgeons.

DR. DON B. LOWE, B. F. Goodrich Company; Past-President, American Association of Industrial Physicians and Surgeons.

DR. F. E. POOLE, Lockheed Aircraft Corporation; Director, American Association of Industrial Physicians and Surgeons.

DR. FREDERICK W. SLOBE, President, American Association of Industrial Physicians and Surgeons.

DR. MELVIN N. NEWQUIST, The Texas Company; President-Elect, American Association of Industrial Physicians and Surgeons.

DR. RICHARD P. BELL, Cleveland Diesel Engine Division, General Motors; Director, American Association Industrial Physicians and Surgeons.

DR. A. H. WHITTAKER, Detroit Industries; Director, American Association of Industrial Physicians and Surgeons.

DR. EDWARD P. HELLER, C. B. & Q. Ry.; Director, American Association of Industrial Physicians and Surgeons.

DR. C. O. SAPPINGTON, Consultant; Editor of INDUSTRIAL MEDICINE; Vice-Chairman, A.M.A. Section on Industrial and Preventive Medicine and Public Health.

LIEUT. COLONEL RAYMOND HUSSEY, AUS; recently appointed Professor of Preventive Medicine, School of Occupational Health, Wayne University; Member, A.M.A. Council on Industrial Health.

Industrial Medicine
Reg. U. S. Pat. Off.
The Journal of
Industrial Health, Traumatic Surgery and Occupational Diseases
Established 1932
Executive, Editorial and Publication Offices:
605 No. Michigan Ave., Chicago.

Editor: C. O. Sappington, M.D., Dr. P.H.
Associate Editors:
James T. Case, M.D., F.A.C.S.
Volney S. Cheney, M.D., F.A.C.S.
Hart E. Fisher, M.D., F.A.C.S.
Otto P. Geier, M.D.,
Lydia G. Giberson, M.D.
Emery R. Hayhurst, M.D. Irving Gray, M.D., F.A.C.P.
Edward C. Holmblad, M.D., F.A.C.S.
Rutherford T. Johnstone, M.D.
Willis W. Lasher, M.D., F.A.C.S.
Oscar L. Levin, M.D. Robert T. Legge, M.D., F.A.C.S.
Wm. D. McNally, M.D. Christopher Leggo, M.D.
M. N. Newquist, M.D.
O. A. Sander, M.D.
Frederick W. Slobe, M.D., F.A.C.S.
Publisher: A. D. Cloud.

Volume 14 MARCH, 1945 Number 3

## Tip to Executives

DR. SAPPINGTON'S talk to a combined meeting of the Association for the Advancement of Management and the Cincinnati Academy of Medicine on "The Labor Relations Values of an Industrial Health Program" (page 222) has two significances: (1) that the audience was composed of representatives of medicine *and* management, and (2) that the subject was a common denominator of the best efforts of both. The fact that industrial health programs possess labor relations values is not altogether a recent discovery. Such values have been known to exist, and have been remarked many times. But the presentation of the theory and practice of these values currently evolving, and potentially of increasing importance, *is* new as a meeting subject. And, from the interest shown in its discussion, it is a somewhat overdue item of executive cognizance. The occasion above referred to is the third time DR. SAPPINGTON has given this talk. He will gladly give it again, and often, to similar groups or to management groups only. It is, as it were, the first installment of the "Message of Medicine to Management."

## ". . . . Who Loves His Fellow Men"

ANYONE with imagination enough to think of himself as deaf, dumb and blind can begin, at least, to appreciate the terrific difficulties that would be his as a learner and anyone else's as his teacher. That these difficulties have been overcome in the situation described by DR. RIGERON (page 173), so that a man who cannot see or hear or speak is "holding a full-time, full-salaried job in war industry," with productive capacity "equal to or greater than that of most of his co-workers," and with a "fine attendance record" is a reproach to those in full possession of all their faculties who are not doing as much, and a persuasion toward humility in those who are. This man deserves the "Bright Badge of Courage"; and his foreman, who helped him, and his employer, who encouraged them both, are worthy of membership in the finest organization in this world—the "Order of Abou Ben Adhem." There are many other instances of similar persistence in the industrial picture, though perhaps none of such nearly total eclipse on the one side and total patience on the other as this one. Hundreds of employees, however, to whom their physical limitations could easily seem equally insurmountable, are doing work that ignores them; and dozens of employers—understandingly, because it is largely on account of a like spirit in themselves that they are employers—are giving them the chance. The fineness of soul expressed in such instances is one of the sources from which the renaissance of dependence on moral standards and spiritual values which the world now so badly needs will stem.

## "Security" vs. Self-Reliance

FURTHER along the line of the present need for a revival of interest in moral standards and spiritual values, there was recently an interesting argument between two well-known newspaper columnists regarding the temper of the American people. One says they are "discouraged, disheartened and confused." The other wonders why it seems that "the workers in our war plants—earning the greatest hourly, weekly and yearly wages in the nation's history, with the greatest nest egg in the form of savings in history, with the prospects of a brisk demand for their services at high pay as industry endeavors to catch up with accumulated consumer demand—are 'disillusioned and despairing?'" He doesn't think they are, or that they should be. Whether one columnist or the other is right depends, no doubt, upon whom he is listening to. But the truth is that, for a very large number, the future holds no great assurance. This is their own conclusion, individually and collectively expressed. It is not based on knowledge, or the lessons of experience, or the statistics of fact. Instead it is a state of mind. And when one thinks about it, certain reasons for such a state of mind seem to take shape. With all its history the human race is still young—particularly as to the things that are considered essential in the present so-called civilization. Being young, it goes to extremes. The so-called industrial era was overplayed in its prime, just as the present so-called era of social consciousness is now being overplayed. The pendulum that swung to an excess of employment insecurity has swung to its opposite of all kinds of "security," and now "security" seems to be the principal aim of life. It could normally be expected that in due time the pendulum would return to a reasonable balance. But the equilibrium is being postponed by the very agencies that should be helping it to come about. They are using the controls necessary to wartime government to perpetuate confusion, solidify regimentation, and habituate the people to an alien ideology while at the same time disclaiming any such intention. And thus the prevalent unrest and disquietude are being deplored in words and at the same time egged on in action. "Security" is a powerful instrument. The more inse-

# *Comfort during Coryza*

In addition to bed rest, anti-pyretics and other general measures, a few drops of Sulmefrin bring quick comfort. The danger of sinusitis and other complications is lessened. Sulmefrin is a decongesting preparation containing sulfathiazole. Its mildly alkaline vehicle helps to dissolve mucous and mucopurulent secretions. It produces effective shrinkage of swollen nasal mucosa without the undesirable reactions accompanying excessive vasoconstriction.

Sulmefrin is a stabilized aqueous solution of an effective vasoconstrictor—*dl*-desoxyephedrine hydrochloride (0.125%)—plus sulfathiazole sodium (2.5%). Administered by spray, drops or tamponage.

Sulmefrin
TRADEMARK

SQUIBB

MANUFACTURING CHEMISTS TO THE MEDICAL PROFESSION SINCE 1858

**RELIEVE THAT SORE THROAT QUICKLY AND EFFECTIVELY**

**Non-narcotic NUPORALS have proven clinically effective to allay pain and tenderness of throat and mouth mucous membrane; also to diminish pharyngeal reflexes. NUPORALS*, palatable throat lozenges, contain one mg. of NUPERCAINE* (α-butyloxycinchoninic acid-γ-diethylethylenediamide hydrochloride), the dependable local anesthetic of sustained action.**

**For relief from distress of "sore throat," aphthae (ulcers) and post-tonsillectomy; to lessen the sensitivity of the pharynx prior to passage of stomach tube; to similarly facilitate pharyngeal and laryngeal examination, etc.**

***The taste of* NUPORALS *is not unpleasant.***

***Trade Marks Reg. U. S. Pat. Off. The word "Nuporals" identifies throat lozenges of Ciba's manufacture, each lozenge contains one mg. of Nupercaine.**

*a Ciba Product*

CIBA PHARMACEUTICAL PRODUCTS, INC.
Summit, New Jersey Dept. 1M

Please send literature and generous sample of NUPORALS.

Name of firm _____

Individual and title _____

Street _____

City _____ State _____

Public Library
Detroit, Michigan

cure the present picture can be made to appear, the sweeter the promise for the future. And thus "security," with its every connotation, is being used to the limit for purely political purposes. All the agencies of ruthless politics, promises that were never intended to be kept, deceptions in reports to the people, misrepresentations of facts they ought to know, suppression of news, and propaganda to influence their political opinions have ceased to be rare and uncommon, but have been made the order of the day—with the smear and propaganda experts attacking anyone who has the courage to tell the truth. These are justified in the shibboleth. This kind of double dealing, by the elected representatives of the people has now come to be accepted and excused. Indeed, it is *expected* of those in high places, and the pang of disappointment is too much dulled to protest. With "security" preached and promised until it has become almost the goal of existence, and thus the excuse for anything else, the homely virtues of thrift and simple honesty are laughed at, the political flouting of decency to say nothing of good taste is considered smart, and the *self*-reliance upon which this nation was built is almost as extinct as the dodo. Maybe this is not to be wondered at when we remember that we are only about 50 years removed from the time when it was considered etiquette to blow the nose with the hand that was not holding the meat. We're young, indeed, and the veneer of our civilization is very thin. So why expect much more than disillusion and despair when the morality and integrity that should characterize our leadership are exchanged for slickness, and the spiritual values that should be our anchor in the time of trouble are buried under a mound of sacrifices to the false gods of worldly wisdom.

## Health Education—Whose Responsibility?

DR. GATTO'S able discussion of health education in industry has the question, "How much responsibility for health education should industry be expected to assume?" An attempt to answer that question leads to some interesting comments. How much does it have to assume? The amount it does assume will undoubtedly be that much and no more. For that is all that can possibly be expected of it. Apparently, however, there is a different idea in certain circles. Not long ago we heard a representative of one of the government departments interested in such matters state that industry should assume all of it. The argument was that industry needs health education as a means of reducing its expenses for lost time due to sickness, absenteeism, etc. It was not considered a reply to this argument to say that all the people need health education, so as to reduce their need for medical care. Instead, the rejoinder was that "the government is going to pay for their medical care." This simmers down to the proposition that because health education is needed in industry, industry is going to have to assume it generally because no one else will do so. In other words, the government will treat the symptoms and let whoever will look after their prevention. Here again we have a significance which is purely political, for it is obvious that there is no bureaucratic percentage in urging the voter to change or improve his health habits, or pay any attention to his own physical condition, so long as it is possible to promise him

that, when he votes right, he will be taken care of at government expense whenever he gets sick. The trend of government medicine is, therefore, only curative. And thus the criticism of industrial medicine that it has always been too much curative and too little preventive must shift to government medicine—for government medicine is obviously intended to be only the former and not the latter. Industry, therefore, is way ahead of the so-called "social" trend in medical matters, in so far as it does anything at all in the way of teaching health. True, it is doing considerable along this line, and for its own benefit. For this reason it will be considered selfish. But industry's selfishness in this respect is enlightened selfishness. The government, in its desire for political permanency, is also selfish, but its selfishness is not enlightened.

## WITH Profit, But Not FOR Profit

TWICE before we have included in these editorial columns the paragraphs which follow, setting forth certain matters and things as to which we believe the practice of industrial medicine and surgery would be benefited by their being given immediate and continued attention on the part of industrial physicians and surgeons:

"Standards of industrial medical practice developed and promulgated by industrial physicians and surgeons for medical and health services in large and small industries.

"The establishment by industrial physicians and surgeons of an agency to act as liaison between industrial medicine and industrial management for the interpretation and application of scientific knowledge to common problems.

"Standards for, and introduction of, courses in industrial health for medical schools—prepared and sponsored by industrial physicians and surgeons.

"Recognition of the industrial medical department, in whatever size and however constituted, as a *professional* corollary of management, and responsible only to *top* management, with remuneration on a professional instead of an employee basis."

WE HAD in mind an editorial elaboration of each of these paragraphs, in the above order. But the matter of standards of industrial medical practice has been taken up by the AMA Council on Industrial Health; likewise the standards for courses in industrial health for medical schools. Our comments, therefore, can be postponed, to appear from time to time as reports of progress. This leaves the matters of liaison between medicine and management and the proper recognition of industrial medicine by management to be dealt with in detail. For the present we can treat of only one of these, and can merely touch upon that one. This by way of the statement that we have omitted from this issue a display advertisement which was headed "Physician Wanted" and then went on to describe the situation he was wanted for as "full-time industrial work in plant of 7,000 to 12,000 to work with staff of two other doctors and eight nurses." The salary offered was, in our opinion, about 40% of what any physician who could fill such a place ought to receive. In line with our editorial policy of publishing everything that is indicative of what is happening *to* industrial medicine as well as what is occurring *in* it, this advertisement might well have been included with the others in these pages. But, as above set forth, it is our profound conviction that the industrial medical department in every one of its manifestations should be a *professional* corollary of management and responsible only to *top* management, and (2) that the remuneration of all medical and nursing personnel in the industrial medical department should be on a *professional* instead of an employee basis. And so we simply can't let anyone get the idea from anything appearing in this journal that it might be possible to employ a *physician* for *full-time industrial medical work* for less than what such a man ought to receive. Managements have heard often, and from many sources, that industrial medical services pay dividends. They do, indeed. But the dividends they pay are skittish; they shy off and run away when executives—having discovered that medical services can be conducted *with* profit—begin trying to conduct them *for* profit.

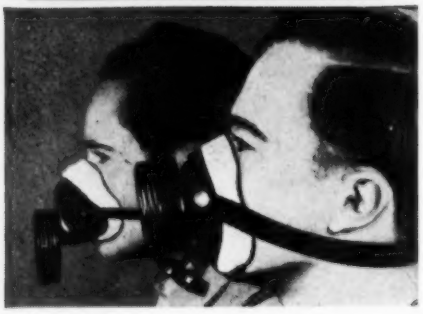
## DR. PILGRIM

ALREADY far advanced in the year as to which there is hopefulness of heart in writing it 194V, and much has happened since last these notes inscribed: PRESS NEWS of praise for the 99th Division (the son being then with the same) on account of five days and nights of continuous action wherein, on captured Germans, were found Von Runstedt's orders concerning the major movements of enemy forces—for all of which the correspondents characterized the Division as "the battle babies" who received their baptism of fire in this engagement. . . . THE mid-winter scientific sessions of Central States Society, with clinics at St. Luke's where clinical pathological conferences by DR. EDWIN HIRSCH and staff were well conducted, these followed by case demonstrations and excellent discussions by DRS. RYERSON, LYON, YOUNG, JACOBSEN, KILBOURN, CHANDLER and MOCK, and hearing WALTER PRIEST on penicillin therapy in problems of industrial medicine and surgery, and a round-table on "Fixation of Fractures" at which DR. FRED SLOBE did a pleasing job as moderator, with COMMANDER TIBBETS, LIEUT. COL. LEWIN, and DRS. CUBBINS, DIEHR, and WELLMERLING participating. And the annual dinner, and a panel on "Head Injuries," DR. HOLMBLAD most admirably presiding, with opinions by DRS. PERCIVAL BAILEY, HAROLD VORIS, PAUL BUCY, and ROLAND MACKAY. An interesting day, with much credit to the program committee, DRS. VALENTINE and GEBHARD, as well as DR. FRED MILLER, Society President. . . . AN AFTERNOON and evening with DRS. SLOBE, HOLMBLAD, and NEWQUIST, on plans for the April meeting of the industrial physicians and surgeons, nurses, hygienists, and—a new member of the Conference—the industrial dentists; all of which was "love's labor lost" for this year, though possibly useful later. . . . ADDRESSING a meeting of Chicago Safety Council on "Labor Relations Values of Health and Safety Programs," wherein great interest shown. And the same day to the Ventilating & Air Conditioning Contractors Association anent the MMS of the forthcoming "Handbook of Hazardous Gases and Vapors in Industry," the work of BAILEY and JENNINGS, of Northwestern's Technological Institute, and making appraisal of the same. . . . WHEREAFTER to Boston, and studying of some extraordinary cases relating to the manufacture of fluorescent tubing. . . . AND then to southwestern Indiana on a coal mining investigation, where were the taking of air samples on the "graveyard" shift from midnight to 6:00 A.M., and conferences with DRS. M. H. C. JOHNSON and VICTOR BRIAN. . . . THEN home, to a long list of engagements, and over all the fervent wish for peace, and the season of reunion, and more time in which it could be given me to look upon "the bright countenance of truth, in the quiet and still air of delightful studies."

SIMPLE

WILLSON No. 5 and 45 Lightweight Respirators with easily replaceable filters protect workers. They remove harmful dusts and mists. Bureau of Mines Approvals for various hazards. Filters tested for low breathing resistance.

SAFE



Two sizes for wide range of faces assure safety of a good fit. Form molded rubber facepiece prevents leakage at edges. Adjustable headband and nose spring maintain tight seal.

COMFORTABLE

Comfort features of WILLSON Respirators make them easy to wear. Their light weight requires little headband pressure. Compactness permits full vision—safety goggles can be worn. Washable cotton FACELET* protects face.

*Trade Mark Reg. U. S. Pat. Off.

*Get in touch with your WILLSON Safety Service Distributor for full information. Or write Dept. IM-6.*

GOGGLES • RESPIRATORS • GAS MASKS • HELMETS

DOUBLE WILLSON PRODUCTS INCORPORATED READING, PA., U.S.A. Established 1870

# "Hardening" in Industrial Allergic Dermatitis

SAMUEL M. PECK, *Senior Surgeon (R),*
JAMES Q. GANT, JR., *Surgeon (R),*
*and*
LOUIS SCHWARTZ, *Medical Director,*
*Dermatoses Section, Industrial Hygiene Division,*
*Bureau of State Services, U. S. Public Health Service*

IN SPITE of the widespread opinion held by many industrial physicians that what has been referred to as "hardening" takes place, doubts about the occurrence of this phenomenon have been recently expressed.[1,2,3,4] By "hardening" is meant the disappearance or the failure of reappearance of an allergic contact type of dermatitis in sensitized individuals on repeated exposure in industry to the sensitizing chemical. "Hardening" may be permanent but in most instances it disappears if exposure is discontinued for any length of time. The degree of "hardening" varies also. Exposure to a greater concentration of the sensitizing chemical than that to which tolerance has been established may cause a recurrence of the dermatitis until a further decrease in sensitivity occurs.

Even those who doubt that this phenomenon occurs in industry will admit that an analogous phenomenon has been observed by both allergists and dermatologists in non-industrial allergic contact eczema, which is after all the same disease process as industrial allergic contact dermatitis.

Because "hardening" or acquired hyposensitivity in industry occurs after repeated percutaneous contacts, the numerous instances of epidermal desensitization successfully attained by oral or hypodermic administration of allergens will not be cited. As an illustration of non-industrial "hardening" by the percutaneous route several striking examples will suffice.

Shelmire[5] observed a white boy who had repeated attacks of clinical ivy dermatitis and who gave positive patch test reactions to the oleoresins of Toxicodendron radicans, T. quercifolum, T. diversilatum, and T. vernix, when diluted 5,000 times in corn oil. The boy was repeatedly patch tested with varying strengths of the oleoresins of T. radicans. He was tested at four to seven day intervals with 15 to 30 skin tests for a period of six months. The skin sensitivity was gradually but constantly decreased. At the end of the six months testing period, patch tests with a 1:10 dilution of the four species of toxicodendron were negative. Significantly, dermatitis did not follow on repeated exposure to poison ivy and poison summac.

Here we have a well-controlled experiment which shows that desensitization or "hardening" can be induced by repeated percutaneous contact with the sensitizing chemical on the intact skin.

That this is not an isolated instance is shown by the work of Maisel,[6] who was able to desensitize an individual who was sensitive to poison ivy by subjecting him to baths containing increasing amounts of the oleoresin of poison ivy for varying periods of time.

Riehl, Jr., Milbrodt, Ginsberg, Stewart, Becker and Keeney, as well as others, have successfully used the percutaneous method to induce epidermal hyposensitivity.[7]

Jadassohn,[8] the originator of the patch test, and one of the most illustrious names in dermatology, in 1923 pointed out the occurrence of "hardening" in individuals with allergic contact dermatitis. He even used the term "hardening" ("Abhartung") to describe the development of tolerance to the sensitizing chemical

# In YOUR Factory

# PAXLANOSAV*

## HEAVY DUTY SKIN CLEANSER

## INSURES "PRODUCTION-PLUS" CONDITIONING OF SKILLFUL, SENSITIVE HANDS

Helping to protect toughened, sensitive hands against annoying and painful irritations, chapping and stiffness so they can give maximum production that extra boost—assisting in the fight against absenteeism caused by dangerous dermatitis—this has been the job of Pax Heavy Duty Granulated Skin Cleanser for nearly a generation in many thousands of factories everywhere.

Famous Pax Heavy Duty—specified and recommended by safety and medical directors everywhere because of its ability to keep the most work-toughened hands soft, flexible, sensitive and deft—has now been even further improved by the integration of Paxlanosav, a blended emollient containing several ingredients including lanolin. Now Paxlanosav Heavy Duty cannot be surpassed in effective cleanliness and safety by any other granulated skin cleanser of any type, at any price.

Paxlanosav Heavy Duty costs only a fraction of a cent a week to keep each worker's hands in prime "production-plus" condition. With a pH as low as drinking water, rich abundant lather, no gritty abrasive mineral scrubbers, no free alkali or caustics, low cost Paxlanosav Heavy Duty can be one of your most profitable investments to assure more production, less lost manhours and increased employee goodwill.

PAX

TRADEMARK REG. U.S. PAT. OFF.

*When you purchase any Pax Product you also purchase the experience and ability of Pax Technicians acquired through 20 years of exhaustive development and research.*

Try Paxlanosav Heavy Duty! Prove to yourself that it is safe, efficient, economical. Write on your company letterhead, or mail the coupon, for a liberal FREE SAMPLE carton. No cost, no obligation!

G. H. PACKWOOD MFG. CO.
1545 Tower Grove Ave., St. Louis 10, Mo.

Please send sample carton of Paxlanosav Heavy Duty Granulated Skin Cleanser without cost or obligation.

Attach To Your Company Letterhead

Name.....

Title.....

Employees: Men..... Women.....

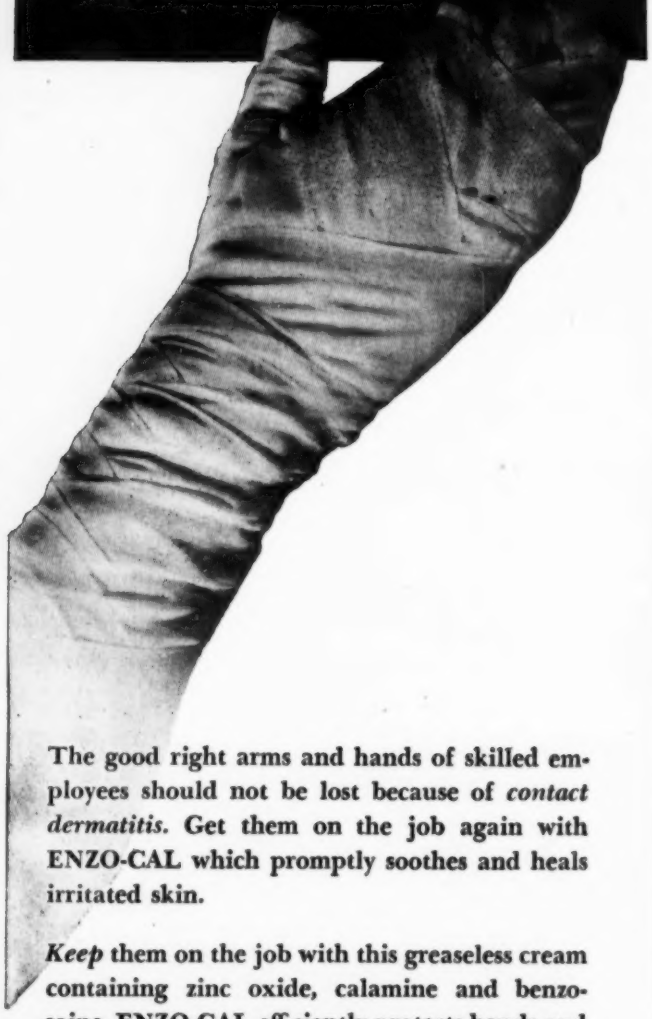
3

**G. H. PACKWOOD MFG. CO.**

1545-55 Tower Grove Ave. • Saint Louis 10, Missouri


Public Library
Detroit, Michigan

GET—AND KEEP—
THIS HAND BACK IN
PRODUCTION



The good right arms and hands of skilled employees should not be lost because of *contact dermatitis.* Get them on the job again with ENZO-CAL which promptly soothes and heals irritated skin.

*Keep* them on the job with this greaseless cream containing zinc oxide, calamine and benzocaine. ENZO-CAL efficiently protects hands and arms against contact with oil and chemical irritants.

ENZO-CAL*

the protective, soothing antipruritic cream that aids healing

Available in 2 oz. tubes and 1 lb. jars.

Sample and full information to physicians on request by writing to Crookes Laboratories, Inc., 305 East 45th Street, New York 17, N. Y.

*Trade-mark Reg. U. S. Pat. Off.

CROOKES

in industry. Jadassohn cited specific individuals with dermatitis who were sensitive to a number of allergens, proven by the patch test, who became hyposensitive after repeated contact of the allergens with the intact skin.

In 1922 Blaschko, writing in the classic work of Ullmann, Oppenheim and Rille[9] on occupational dermatoses, called attention to the occurrence of "hardening" ("Abhartung") in industrial dermatitis. He also pointed out that this acquired hyposensitivity may be transient. Sulzberger[10] in his book on dermatologic allergy also calls attention to the phenomenon.

In 1931, and in other publications since then, Schwartz[11] in this country has repeatedly called attention to his observations on "hardening" in industry. Based on these observations he suggested at the outbreak of World War II that workers who developed an allergic contact dermatitis, especially in the munitions industry, should not be removed from their work, and he predicted that in the majority of instances "hardening" would occur. His suggestion resulted in a great saving in manpower and proved a practical procedure.

Probst, et al.[3], are cited as some of the authors who believe from their observations that workers with tetryl do not appear to develop any "hardening" on repeated exposures, yet it is stated in their paper, page 475, "all but a very small group of allergic persons were ultimately returned to their regular jobs."

One of the recent criticisms advanced against the conception of "hardening" was that reports of its occurrence were not accompanied by sufficient scientific data to prove that this phenomenon actually occurred. It was said that in order to establish such an observation quantitative patch tests should have been made when the sensitivity first manifested itself and a repetition of the quantitative patch test procedure should have been again carried out when the so-called "hardening" took place.

Gougerot and Desmont[12] studied allergic contact dermatitis occurring among workers applying lacquer. It could be shown that they were dealing with a sensitizer by the fact that the dermatitis did not develop until the workers had been on the job for a period of about three weeks, and when the dermatitis did develop, patch tests with the lacquer were positive. They noted that when the workers continued at their jobs, the attacks of dermatitis became progressively less violent and the duration of the dermatitis was less. They were able to follow the attacks of dermatitis in two workers carefully. One of them had six attacks over a period of a few months while she was still working. Each attack was less severe and finally continued contact did not elicit a dermatitis. They were able to follow this patient for a year. In another patient after one attack there was no relapse for six years (the period of observation during which the work was continued). They reported similar observations in another worker.

Koch and Peters[13] studied cases of occupational eczema proven by patch tests. The observed 24 such cases who continued at their jobs. Of these 33⅓% finally were able to continue with their occupations without any ill effects. They also were able to study eczema in bakers. Of 22 patients who did not change their occupations in spite of their dermatitis, 50% finally could continue their work without a recurrence of their skin eruptions.

The personnel of the Dermatoses Section of the Industrial Hygiene Division, U. S. Public Health Service, have observed instances of "hardening" prac-

# "PLUS FACTORS"

in

# FOILLE

## TREATMENT of BURNS

PHYSICALLY... Foille is adapted completely to the Pressure Dressing Technic where physician elects to employ this method. Also...in addition

CHEMICALLY... consider these vital "Plus Factors" whereby Foille

(a) Consistently avoids sepsis
(b) Markedly controls pain
(c) Stimulates quick granulation

FOILLE EMULSION { 5 gallons, gallons, quarts, pints, 4-oz., 2-oz. bottles.

FOILLE OINTMENT { stable, petrolatum-vegetable oil base — 6 pound, 1 pound jars.

**CARBISULPHOIL COMPANY**

3118 SWISS AVENUE, DALLAS, TEXAS, U.S.A.

CHICAGO • NEW YORK • LOS ANGELES • BIRMINGHAM

# Effective Convenient Economical

THE effectiveness of Mercurochrome has been demonstrated by more than twenty years of extensive clinical use. For professional convenience Mercurochrome is supplied in four forms—Aqueous Solution in Applicator Bottles for the treatment of minor wounds, Surgical Solution for preoperative skin disinfection, Tablets and Powder from which solutions of any desired concentration may readily be prepared.

## Mercurochrome

(H. W. & D. brand of merbromin, dibromoxymercurifluorescein-sodium)

is economical because stock solutions may be dispensed quickly and at low cost. Stock solutions keep indefinitely.

Mercurochrome is antiseptic and relatively non-irritating and non-toxic in wounds.

Complete literature will be furnished on request.

HYNSON, WESTCOTT & DUNNING, INC.
BALTIMORE, MARYLAND


tically in all industries where there are allergic dermatoses. The authors would like to cite a few of these observations.

In plants manufacturing and working with synthetic resin varnishes there is a high incidence of dermatitis among the workers coming in contact with these varnishes. These materials consist of the incompletely cured or incompletely polymerized resins, as well as some of the by-products produced in the manufacture of the varnish. Patch tests with the resin varnishes gave positive reactions in a number of the workers who had or had had dermatitis from contact with them. Other workers who had dermatitis but were now free from any skin eruptions and were still continuing at work failed to give positive patch tests with these materials. Although it is true that the workers had not been previously patch tested when they had dermatitis and were still sensitive, too much criticism cannot be leveled at the interpretation of such findings as examples of "hardening," because at present they are working with the same chemicals and are having no dermatitis.

Schwartz and Goldsmith[14] studied a large number of cases of tetryl and TNT dermatitis in munitions plants. It has been proved that we are dealing here with an allergic contact dermatitis.

In one plant approximately 500 workers were exposed to tetryl. In December, 1941, 56 of these workers developed dermatitis. In September, 1942, only four cases of dermatitis were reported in this plant. In another plant 6,364 workers were exposed to tetryl, 1,905 or 30% developed dermatitis. Of these 1,618 persons, or 85%, were able to return to tetryl contact without any ill effects.

Only 137 of the total number of cases of tetryl dermatitis in these two plants were not back at work in May, 1943, because of a suspected continuing tetryl sensitivity. Of these 78, or 57%, no longer showed a positive patch test to tetryl. The remaining workers did show a positive patch test. Since the 78 tested had a typical tetryl dermatitis when they were removed from contact with tetryl, in no way differing as far as could be ascertained from those who were still patch positive, it may be inferred, although not conclusively proven, that the negative patch tests indicated spontaneous desensitization.

The incidence of tetryl dermatitis rises with the employment of new workers and gradually decreases as those who stay on the job become "hardened." Such findings cannot be interpreted as the result of the weeding out of tetryl sensitive cases since such observations are made on the basis of a continued contact with tetryl of workers who manifested a sensitivity by the development of dermatitis. True that many of the cases of tetryl dermatitis were so severe that they were taken away from tetryl in order to speed up recovery, but most of these cases were returned to work with tetryl after they got well, and experienced no recurrence of dermatitis.

TNT also produces an allergic contact dermatitis which chiefly affects the palms and is very characteristic. It is associated with a positive patch test to TNT.

At one plant where TNT was manufactured 1,125 workers were exposed to TNT. Over a 10-month period (December, 1941, to September, 1942) there were 112 (10%) cases of TNT dermatitis. All of these were able to return to TNT work after recovering from the dermatitis.

At another plant where TNT was molded into shells, the average number of workers exposed to TNT was

# *In* group x-ray surveys *Everything depends on your diagnosis!*

In twelve years of conducting large-scale chest X-Ray surveys, Powers X-Ray Service has never lost sight of the one big objective—to supply the examining physician with radiographs of the highest diagnostic quality possible within the necessary limitations of speed and economy.

*That is why the Powers Method features full-size 14" x 17" radiographs—they provide:*

**1. ACCURACY.** Powers Radiographs feature the same depth and tone from print to print, enabling the examining physician to make accurate comparisons of serial exposures.

**2. HIGH DIAGNOSTIC QUALITY.** Over 3 million successful radiographs testify to the quality of the Powers method. Within the limitations of large-scale examinations, Powers Radiographs are brought to the highest degree of accuracy. *That means fewer missed cases of early lesions!*

**3. EASE OF READING.** Because they are *full-size*, Powers Radiographs save time and eye-strain for the interpreting physician. Special viewers are supplied as part of the Powers Service.

**4. SPEED AND ECONOMY.** Trained Powers technicians set up the portable equipment and operate it—at a rate as high as 150 subjects per hour. The cost is less than any other method offering comparable quality—*considerably* less when the cost of cases missed by less effective methods is considered.

**POWERS X-RAY SERVICE** *is available anywhere in the United States for large-scale examinations. Interested physicians are invited to write for further details to:*

POWERS X-RAY SERVICE

# POWERS X-RAY SERVICE

GLEN COVE, L. I., N. Y. *Group Radiography*

IODINE...A PREFERRED ANTISEPTIC

Its Action is Efficient

Safety from infection must be certain . . . and the trustworthiness of Iodine has been continuously demonstrated through many years of laboratory tests and clinical trials. Its action is both bactericidal and bacteriostatic. Aqueous Iodine solutions, for instance, are shown to be bactericidal against Staphylococcus aureus and E. coli in dilutions approximately as high as those showing bacteriostasis.

Iodine can be relied upon to prevent infection when used pre-operatively, and in the treatment of wounds and abrasions.

IODINE
Foe of Infection

Iodine Educational Bureau, Inc.
120 Broadway, New York 5, N. Y.

759. Of these 186, or 24.5%, developed TNT dermatitis. One hundred fifty-eight, or 85%, of the dermatitis cases were able to return to TNT contact without further ill effects. Of those affected 28, or only 3.7%, of the total exposed were permanently removed from TNT contact.

"Hardening" has also been reported among the workers manufacturing munitions in Australia. Murray[15] and his co-workers state that the majority of workers who are in contact with tetryl develop dermatitis. However, 90% of them became immune or "salted" and could resume work with no further ill effects.

A number of authors have attempted to desensitize workers with allergic occupational dermatitis by controlled exposure to the sensitizing chemicals.

Stuempke[16] successfully desensitized workers with proved allergic contact dermatitis. This was done by application to the skin of gradually increasing amounts of substances causing the dermatitis. He was not successful with all of the substances in which this method was tried. He also noted a number of instances of spontaneous desensitization among industrial workers.

Serota[17] studied 21 cases of wood polishers who were sensitive to the polish and had developed dermatitis. By means of the application of controlled amounts of the polish in the form of wet dressings he was successful in desensitizing the majority of the workers so that they could continue at their occupation without developing a dermatitis.

Schreus[18] was successful in desensitizing a number of bakers who had developed dermatitis from the ammonium persulfate in the dough. The sensitivity in these cases could be demonstrated by the patch test. He was able to accomplish desensitization by having the sensitized individuals knead a dough made of bolus alba containing increasing amounts of ammonium persulfate. Finally the workers were able to continue at their occupations without any further ill effects. In this study quantitative patch tests were not necessary because the gradually increasing amounts of the chemical in the dough served as a quantitative measure of the increasing desensitization.

Martenstein[19] was also able to desensitize bakers with eczema who were sensitive to ammonium persulfate by rubbing into their skins gradually increasing amounts of the chemical.

Carrié[20] reported two cases of baker's dermatitis with positive patch tests to ammonium persulfate in whom he was able to achieve desensitization by percutaneous application of increasing amounts of the chemical. In this study quantitative skin tests were done to show the development of the hyposensitivity. The workers who were desensitized were able to return to their occupations without further ill effects.

## Conclusions

THERE is ample clinical and experimental evidence to support the fact that "hardening" occurs frequently in industry.

2. "Hardening" does not occur in all individuals.

3. Exposure to a greater concentration of the sensitizing chemical than that to which tolerance has been established may cause a recurrence of the dermatitis until a further decrease in sensitivity occurs.

4. "Hardening" may be permanent but in most instances it disappears if the exposure to the sensitizing chemical is discontinued for any length of time.

## Bibliography

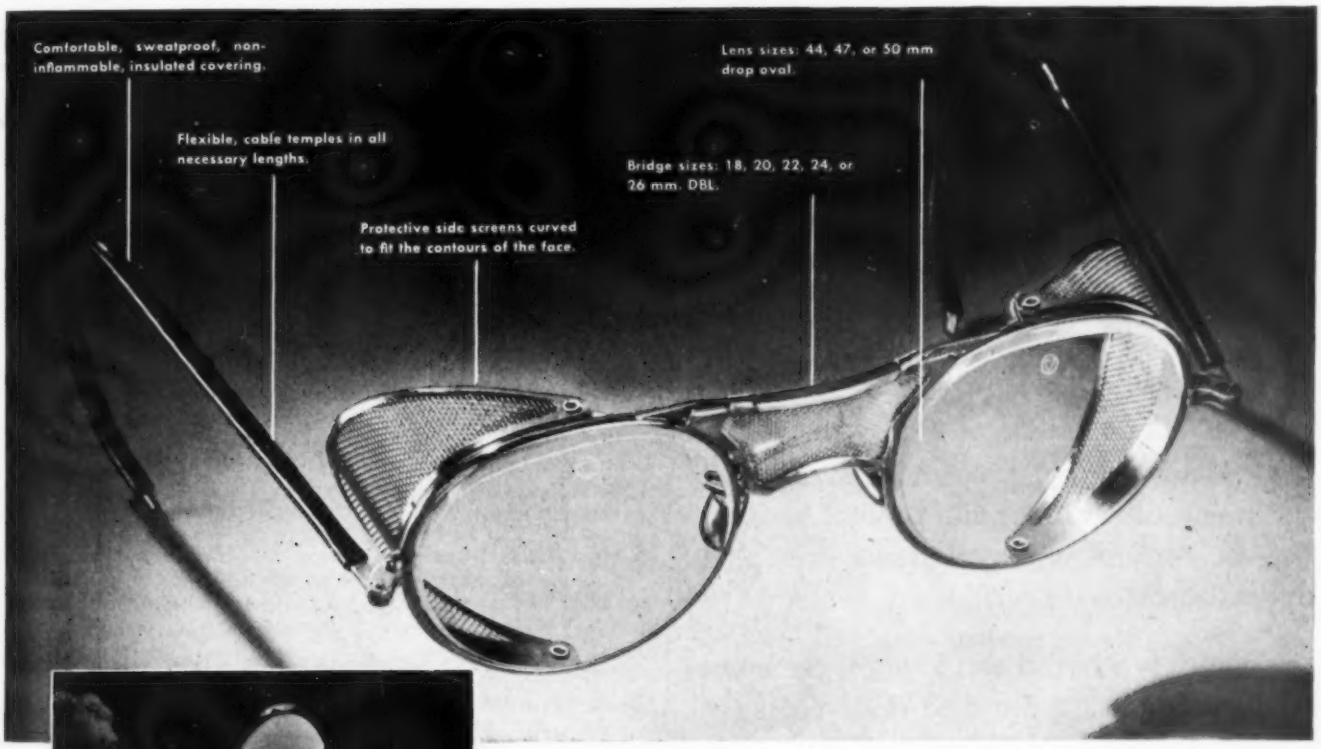
1. KEIL, H.: The Pre-placement Patch Test. *Industrial Medicine*. 14:1, 18-19 (January) 1945.

# *Employees appreciate this* GOGGLE COMFORT

THE EYE SAFETY PROGRAM you develop becomes effective only when workers *wear* their goggles on the job. Obviously, an early step in developing such a program should be the selection of goggles that are *comfortable and easy to wear.*

Bausch & Lomb was among the first to recognize the need for *comfortable* safety eyewear. With a long background of experience in the manufacture of regular spectacles, Bausch & Lomb developed a complete line of safety eyewear in sizes and shapes to fit all faces . . . comfortably.

Complete selections of metal spectacle-type or cup-type goggles are available for every job need, fitted with Bausch & Lomb Safety Lenses, plano or prescription ground. B&L Safety Lenses (either single vision or bifocal), professionally prescribed to the visual requirements of the job, can be worn with comfort and convenience comparable to that of workers' regular glasses. Write for complete details. Bausch & Lomb Optical Company, Rochester 2, N.Y.

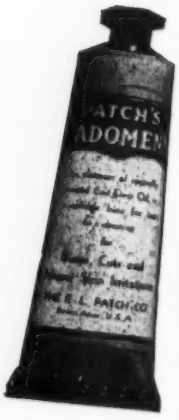

Comfortable, sweatproof, non-inflammable, insulated covering.
Flexible, cable temples in all necessary lengths.
Protective side screens curved to fit the contours of the face.
Bridge sizes: 18, 20, 22, 24, or 26 mm. DBL.
Lens sizes: 44, 47, or 50 mm. drop oval.

**The same precision**—Bausch & Lomb Safety Eyewear is built to the same standards of quality and precision as are the many precision optical instruments for military, industrial, scientific, and educational use. Among these Bausch & Lomb instruments is the Contour Measuring Projector, used by industry for accurate measurement and comparison of products and parts.

BAUSCH & LOMB *Safety Eyewear*

# THE FIRST CHOICE OF MANY PHYSICIANS—

## in Minor Burns and Skin Affections




## GADOMENT . . .

*The Original*
*American Cod Liver Oil*
*Ointment*

—provides simple, prompt burn surface treatment; offers relief and prompt healing also in certain skin conditions, varicose ulcers, abrasions, pruritus, etc.

Gadoment is a bland cod liver oil ointment which spreads evenly and does not seep through the recommended dressing.

*Write for your copy of the new booklet "Industrial Skin Hazards."*

***Canadian Producers:***
**CHARLES E. FROSST & CO.**
**Box 247, Montreal**

**THE E. L. PATCH COMPANY**
BOSTON, MASS.

2. HALL, A. FLETCHER: Occupational Contact Dermatitis Among Aircraft Workers. *J. A. M. A.*, 125: 179-190 (May 20) 1944.
3. PROBST, E. W., MUND, M. H., and LEWIS, L. D.: Effects of Tetryl. *J.A.M.A.*, 126: 424-427 (October, 14) 1944.
4. GREEN, G. COLMAN: The Occurrence of "Morphia Rash" in the Manufacture of Morphine Salts from Opium. *Brit. J. Dermat. & Syph.*, 56: 182-186 (July-August) 1944.
5. SHELMIRE, BEDFORD: The Poison Ivy Plant and Its Oleoresins. *J. Invest. Dermat.*, 4: 337-348, 1941.
6. MAISEL, F.: Poison Ivy: A New Method of Immunization. *J. Allergy*, 4: 35-37, 1933.
7. (a) URBACH, E.: Die Bedeutung der Haut als Immunitats organ. *Zeschr. f. Immunitatsforsch*, 55: 471-500, 1928. (b) ZRBACH, E., Experimental Studies of the Question of Percutaneous Desensitization. *Zentralb. f. Haut u. Geschlecht.*, 45: 507, 1933. (c) RIEHL, JR., MILBRADT, GINSBERG, STEWART and BECKER, and KEENEY, as well as others used the percutaneous method of achieving desensitization (quoted by ZRBACH: Allergy: Zurbach, E., and Gottlieb, P. M. Grune & Stratton, New York, 1943, p. 250).
8. JADASSOHN, J.: Bemerkungen Zur Sensibilisierung Und Desensibilisierung ei Den Ekzemen. *Klin. Wchnschr.*, 2:1734-39 (September 17) 1923.
9. BLASCHKO, A.: Allegemine Atiologie und Wesen der gewerblichen Haut Affektionen. Die Schadigungen der Haut durch Beruf und gewerbliche Arbeit, Oppenheim, M., Rille, J. H., and Ullmann, K., Leopold Voss, Leipzig, 1932. Vol. 1, p. 11.
10. SULZBERGER, MARION B.: Occupational Allergy. Charles C. Thomas, Baltimore, Maryland, 1940, p. 56.
11. SCHWARTZ, L.: (a) Dermatitis Venanata Due to Contact with Brazilian Walnut Wood. *Pub. Health Reports*, 46: 1938-1942 (August 14) 1931. (b) Dermatitis from Explosives. *J.A.M.A.*, 125:186-190 (May 20) 1944. (c) Allergic Occupational Dermatitis in Our War Industries. *Ann. Allergy*, 2:387-395 (September-October) 1944.
12. GOUGEROT, H., and DESMONT, TH.: Occupational Lacquer Eczema (Positive Cutaneous Tests); Occupational Desensitization or Immunization. *Bull. Soc. franc. de Dermat.*, 45:1788-1792, 1938.
13. KOCH, F. and PETERS, L.: Unbersuchungen an Gewerebeeczemkranken. *Dermat. Wchnschr.*, 108:222-226 (February 25) 1939.
14. Industrial Hygiene Information Circular No. 13 (May 15) 1943.
15. MURRAY, H. M. L., PRUNSTER, R. W., and ANDERSON, R. D.: The Incidence of Tetryl Dermatitis or "C.E." Rash. *Med. Australia*, 1:104-6 (February) 1944.
16. STUMPKE, G.: Uber Fragen der Desensibilisierung. Wchnschrft., 107:1137-1142 (September 24) 1938.
17. SERATA, L.: Dermatoses in Wood Polishing and Their Prevention. Gigiena Trudi i tek bezapasnosti, 3:33, 1935.
18. SCHREUS, H. T.: Bakers' Eczema. *Zentralbl. f. Haut u. Geschlechtskr.*, 54:4, 1936.
19. MARTENSTEIN: Eczema in Bakers: Attempts at Desensitization. Report *Verein Dresdener Dermatologen* (December 11) 1935.
20. CARRIES: Two Cases of Bakers' Eczema. *Verlin Dueseldorfer Dermat.* Session of November 18, 1935.

---

DR. CHRISTOPHER LEGGO, for the last several years Industrial Hygiene Physician, Ohio State Department of Health, Columbus, has joined the medical staff of the Clinton Engineer Works, Tennessee Eastman Division, Knoxville, Tennessee.

DR. C. O. SAPPINGTON, Editor of INDUSTRIAL MEDICINE, on March 1, 1945, at Cincinnati, Ohio, addressed a combined meeting of the Society for the Advancement of Management and the Cincinnati Academy of Medicine on the subject, "The Labor Relations Value of Health Programs in Industry."

DR. JOSEPH P. WEBB, instructor in medicine and research fellow in aviation medicine at the University of Cincinnati, has accepted an appointment as internist and medical director at the Chesapeake & Ohio Hospital, at Huntington.

—*West Virginia Med. J.*, February.

### Dental Conditions and Certain Industrial Processes

AN UNUSUAL correlation between oral health condition and the worker's ability to perform certain industrial processes is reported by the Bureau of Industrial Hygiene of the Pennsylvania Department of Health, as a result of an investigation made for a plant manufacturing electrical supplies. In one operation the employee is required to raise the arms and, with a winding motion, complete that particular assembly. New employees sometimes complained of severe pain in the forearm muscles after a short period at this work, but ascribed it to neuritis or rheumatism. Upon examination of the oral cavity by industrial hygiene medical or dental personnel, however, it was found that those workers affected in this way showed marked infection of the tonsils, mouth, or post-nasal area, while those suffering no pain had no such infection. The condition disappeared when infected teeth, tonsils, or adenoids were removed or treated.

—*Industrial Hygiene News Letter*, February, 1945.

# *Adequate Anti-Anemic Therapy* IMPORTANT IN INDUSTRIAL PRACTICE

NOT only in the interest of optimal work output, but in the interest of the worker as well, even the milder degrees of hypochromic anemia call for prompt and thorough correction. The lowered hemoglobin level which is pathognomonic of this condition is usually associated with deficiencies of other essential nutrients also, not only of iron. Hence adequate therapy should provide more than merely iron.

Heptuna proves particularly effective because it provides all essential factors needed to restore the hemoglobin level and the patient as well. It furnishes, in addition to an adequate amount of highly available bivalent iron, the fat-soluble vitamins A and D, and the B complex vitamins (partly derived from liver extract and yeast) so essential to iron utilization, to better appetite, and to improved endurance. In most instances one capsule per day together with the daily diet proves adequate in correcting the anemic state.

**J. B. ROERIG & COMPANY**
**536 Lake Shore Drive • Chicago 11, Illinois**

***Each Capsule Contains:***

| | |
|---|---|
| FERROUS SULFATE | 4.5 gr. |
| VITAMIN A | 5000 U.S.P. Units |
| VITAMIN $B_1$ (1 mg.) | 333 U.S.P. Units |
| VITAMIN D | 500 U.S.P. Units |
| VITAMIN G (0.50 mg.) | 500 micrograms |

together with liver concentrate (vitamin fraction), derived from 4 grams of fresh liver, and dried brewers' yeast.

# Heptuna
*a* **ROERIG** *Preparation*

## Industrial Medicine in Wartime

*—A Symposium: Published in "California & Western Medicine," January, 1945—*

*Papers Collected by*
RUTHERFORD T. JOHNSTONE, M.D.,
*Los Angeles*

DR. RUTHERFORD T. JOHNSTONE is Secretary of the WESTERN ASSOCIATION OF INDUSTRIAL PHYSICIANS AND SURGEONS. As noted on page 12, the 1945 annual meeting of that Association has been cancelled. It would seem that since the members cannot go to their usual convention this year, DR. JOHNSTONE has succeeded in taking the convention to them—as well as to many others in California who are interested in industrial medical matters. Whether or not he had this purpose in mind, the Symposium he presents in *California & Western Medicine* for January, 1945, has all the variety and value of a well-organized convention program. We regret that the whole text of each of the articles cannot be reprinted here, but the following selections from the titles marked * will indicate the fine quality of the contributions. The Symposium, comprising 19 pages of the California journal was as follows:

PART I: "The Interrelationships of Selective Placement and Rehabilitation"—CLIFFORD KUH, M.D., Permanente Foundation Hospital, Oakland.

*"How May a Worker Receive Adequate Medical Care?" A. C. DICK, M.D., Medical Director, Consolidated Vultee, San Diego.

"The Epileptic in Industry"—WM. G. LENNOX, M.D., Boston.

*"Tuberculosis in Industry"—HOWARD W. BOSWORTH, M.D., Los Angeles.

*"Venereal Disease Control in Industry"—HAROLD T. CASTBERG, M.D., Chief Bureau of Industrial Health, California Department of Public Health.

*"The Place of Dentistry in Industry"—HUGO M. KULSTAD, D.D.S., Hollywood, Member of the Council on Dental Health, American Dental Association.

"The Use of Vitamin Supplements in Industry"—HOWARD W. HAGGARD, M.D., New Haven, Connecticut.

"Control of Toxic Exposures" — HUGO DIERCKER, M.D., PAUL G. BROWN, Los Angeles.

"Chart—Treatment of the Acute Occupational Intoxications"—RUTHERFORD T. JOHNSTONE, M.D., Los Angeles.

"Treatment of More Common Industrial Injuries"—Table.

PART II: "Sciatic Syndrome of Traumatic Origin"—RUPERT B. RANEY, M.D., Los Angeles.

"New Concepts in the Therapy of Industrial Contact Dermatitis"—NELSON PAUL ANDERSON, M.D., Los Angeles.

"Emergency Treatment of Head Injuries"—W. J. VAN DEN BERG, M.D., Sacramento.

*"Industrial Urologic Injuries"—ALEXANDER H. PEACOCK, M.D., Seattle.

*"The Treatment of Soft Tissue Injuries to the Hand—See Footnote to Article.

*"Hand Fractures in Industry"—C. C. CUTTING, M.D., Oakland.

"Treatment of Industrial Eye Injuries"—JOHN N. OSBURN, M.D., Los Angeles.

"Burns"—J. C. ROONEY, M.D., Santa Monica.

## The Widening Field of Industrial Medicine

RUTHERFORD T. JOHNSTONE, M.D.

ACTUALLY the war has not altered greatly the practice of industrial medicine; its essentials remain unchanged. But the "brazen throat of war" served to proclaim the importance of this facet of medicine first given cognizance by Ramazinni 250 years ago. Today, industrial medicine has reached a level of utility second to no other branch of our profession. Lest there be some who will challenge that statement; who still stigmatize the industrial physician as a "finger-wrapper" or "insurance doctor"; who feel that the practice of industrial medicine requires no special training, and that it can be practiced indifferently with the left hand while the right is devoted to private practice, the following remarks, as well as the contents of this issue, may be illuminating.

Further reflection should make it apparent that there is an immediate need for the inclusion of the subject of industrial medicine within our undergraduate teaching, and in our postgraduate courses. Consider, if you will, the type of program presented each year by our county societies. Annually these are repetitious. The writer does not disclaim the importance of heart disease, diabetes, tuberculosis, arthritis, etc.; but the constant rehashing of these subjects, too often by the same speakers year in and year out, is at least discriminatory. This same criticism is applicable to the usual format of our medical periodicals. It is no longer possible for the general practitioner or specialist to escape contact with the occupational disease problem. It may be startling to some to learn that the occupational diseases constitute the largest number of diseases falling into any one subdivision of medicine. It is obligatory, therefore, that a knowledge of these be disseminated to the profession at large. It is even more essential that those preparing to practice medicine be taught about industrial medicine. It is imperative that our medical schools make room in the curriculum for the adequate teaching of this subject. The urgency awaits the vision and action of our professors.

Long ago industrial medicine outgrew its "safety first" clothes. Preventing or treating the injuries—the traumata resulting from accidents—is now but one phase of an industrial practice. Since World War I new processes have been introduced into industry involving noxious solvents, fumes, dusts, and metals. Nor does there appear to be an end to the wizardry of the chemist or metallurgist when one contemplates the future of the synthetics, plastics and alloys. Few of these processes or the substances involved are free of some danger to the workmen unless adequate protection is supplied. Such protection can be found only in an efficient hygiene program which is one of industry's crying needs today. Medicine must supply industry with trained men and specialized laboratories for this purpose.

For too many years industrial management has employed a worker upon one basis only—his ability to work. No sensible attempt was made to assign a worker to a job according to his mental and physical capacities. Likewise medicine has been guilty of consigning to the human scrapheap those who were physically handicapped; we were content with prescribing a sedative for the epileptic, idleness for the cardiac, or a prosthesis for the cripple. Rarely did a physician extend his interest to the point of securing suitable work for his patient. But industrial medicine has learned to utilize the handicapped individual, whether the deficiency be congenital or acquired, or the result of a war wound. Dr. Kuh reveals how management and industrial medicine are matching job requirements with skill characteristics—matching physical demands with individual capacities. It is particularly important to note that the selective-placement technique worked out by Dr. Kuh and his co-workers, is suitable for *all* workers and does not single out the handicapped person. This is a program to be participated in by the entire profession.

There are still other fields which industrial medicine encompasses, as the title of this comment intimates. With America's increasing interest in the social and economic welfare of its masses, it was inevitable that industrial medicine would be most intimately concerned. Well-meaning, politically-fostered plans to extend medical care have encouraged a goodly percentage of the people to demand Federal medicine. It is this writer's considered opinion that industrial medicine offers the best buffer against socialized medicine as proposed by the Wagner bill, or any subsequent facsimile thereof. It is this phase of medicine which deals most intimately with the very segment of our people for whom better medical care is being demanded. That an employee, aided by his employer, can provide for himself and family adequate preventive and curative medicine is being demonstrated by many industries. Dr. A. C. Dick, Medical Director of Consolidated Vultee Aircraft Corporation, has given this problem a great deal of study, as shown by his able discussion.

Within industry there is the greatest opportunity for discovering tuberculosis in the incipient stage, as proved by the surveys conducted by the National Tuberculosis Association, the U. S. Public Health Service, and the California Tuberculosis Association. There exists an equal opportun-

# She CHOOSES a laxative . . . but ACQUIRES a habit . . . . . .

Every physician knows that one of the worst features of the laxative habit is the progressive failure of the original dose to act effectively. This leads inevitably to harsher purgation.

TAXOL breaks this vicious circle in several ways. First and foremost, TAXOL does not "fade" with time. On the contrary, TAXOL dosage has actually been *reduced* and the patient weaned away from purgatives.

Second, TAXOL employs only **one-tenth of the U.S.P. dose of aloes,** due to the emodin-releasing action of bile on aloes. In consequence, use of TAXOL is free from pelvic congestion and is feasible in menstruation, pregnancy or hemorrhoids.

Third, TAXOL stimulates normal secretions so that there is less need for any cathartic. It may even be used as an adjuvant in biliary anorexia.

Each TAXOL tablet contains 2/5 gr. aloes, 1 gr. bile extract, 1/13 gr. hyoscyamus extract and 3/4 gr. lipoid-free desiccated pancreas and duodenum. This formula produces evacuation in 6 to 12 hours without nausea, griping or ensuing diarrhea.

TAXOL has never been advertised to the public.

Dosage: 1 to 6 tablets daily, swallowed without chewing, before meals or at bedtime. Laxatives should not be used if symptoms of acute appendicitis or intestinal obstruction are present. Supplied in bottles of 50 enteric coated tablets.

**WRITE TODAY FOR A GENEROUS TRIAL PACKAGE**

TAXOL

***The Ethical Laxative***

**LOBICA, INC.**

**1841 BROADWAY, NEW YORK 23, N. Y.**

# Hydrogalvanic THERAPY

**A Most Useful Adjunct in Functional Rehabilitation of Employees, and in treatment of Arthritis, Neuritis, Sciatica, Peripheral Nerve Injuries, Atrophies, Post-Operative cases, etc.**

## The NEW *TECA two circuit method*

provides this effective therapy at its modern best . . . safe, flexible, convenient. No direct skin contact with electrodes.

**TANK TREATMENTS with the new Teca tank arrangement**
**FULL BATH TREATMENTS in any standard bathtub**

**A VALUABLE ASSET FOR THE INDUSTRIAL CLINIC**

TECA

Send for detailed information

**TECA CORPORATION, 220 West 42nd St., New York 18, N. Y.**

Distributors in Principal Cities


ity for a venereal disease program, or for a nationwide nutritional, dental, and mental hygiene program. There are still other frontiers, such as the early recognition and correction of defective hearing or vision; of the problems peculiar to old age or sex.

The limitation of editorial space forbids mention of other worthy contributions to this special number. Suffice it to say that across the horizon of tomorrow awaits the opportunity for organized medicine to create a healthier America; to prevent the recurrence of the situation that found one out of four persons physically or mentally unfit. Since man spends his greatest span of years either in school or at work, the task of maintaining national optimum health must to a great degree be entrusted to industry and our schools. There is increasing evidence that industrial medicine is aware of its opportunity.

---

## How May a Worker Receive Adequate Medical Care?

A. C. DICK, M.D.,
*San Diego, California*

Is it necessary to consider the problem of medical care for a worker as being different from that for other persons? A worker is a member of a community in the same sense as other members of his family, or any other individual, whether or not he produces goods or services for which he receives pay from the management of a plant or facility. In this sense there is no reason for considering that medical care for a worker should differ from that available to other members of his community.

There are several factors, however, with which a worker must contend that do differentiate him from other members of his community. When he loses time from his job, through illness or injury, he loses income for himself and those who depend upon him. Furthermore, his absence from his job constitutes an economic loss to his employer. Thus, industry, as well as the community, has an interest in proper medical care for workers. For this reason, it is proper to consider medical care for workers as a specialized problem.

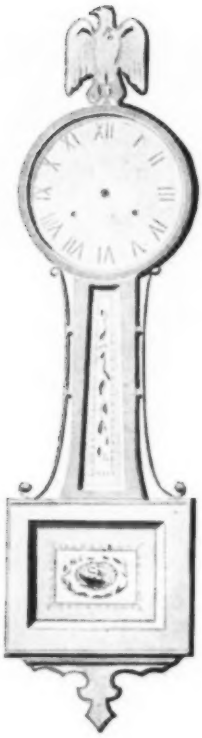
### What is Available?

What is available for a worker in the way of medical care? In a large factory or industry there is usually a management-controlled medical or first aid department for the care of occupational injuries and diseases. Rules and regulations promulgated by the insurance carriers and by the State agencies supervising industrial hygiene, tend to standardize the quality of care in a large industry to the acceptable minimum.

Under the supervision of an experienced full-time industrial physician, the occupational hazards of workers are, as a rule, very well cared for. Because of the many factors involved in industrial medical care, a part-time physician cannot satisfactorily fulfill his obligation either to the worker or to management. If the industrial physician in a plant is there part time because he has several small industries to care for, and if this type of work is all he does, and if he has properly trained nurses on his staff, he can give the worker adequate occupational medical care.

The physician who is in private practice and merely "takes on a little industrial work" to supplement his income (and I know of not many who do so for any other reason) is a menace to industrial medicine, for his interest is not in it. He does not comprehend the problems of factory work, nor does he choose to soil either his clothes or his mind in the study of these problems first-hand.

The proper care of occupational injuries and illnesses begins first with their prevention. Then there must be the proper first-treatment. Following this, the decision must be made whether or not the condition is occupational, then if it is compensable, then if time away from the job should be ordered or a transfer to a different job. Next, the proper time of return to work must be judged, and whether to the same or to a different job. An honest evaluation of disability must be made and finally a follow-up to ascertain the accuracy and effectiveness of diagnosis, treatment, disability evaluation, rehabilitation and proper placement. Analysis must be made of the circumstances surrounding the accident or illness, to the end that a repetition may be avoided. Records must be established and maintained for management, insurance carriers and state agencies, and these must be



# in no time at all

In no time at all you can assure your patient of a constant intake of all these essential vitamins with

## a UNICAP* a day:

| | |
|---|---|
| Vitamin A | 5,000 U.S.P. units |
| Vitamin D | 500 U.S.P. units |
| Ascorbic Acid (Vitamin C) | 37.5 mg. |
| Thiamine Hydrochloride (Vitamin $B_1$) | 1.5 mg. |
| Riboflavin (Vitamin $B_2$, G) | 2.0 mg. |
| Pyridoxine Hydrochloride (Vitamin $B_6$) | 0.2 mg. |
| Calcium Pantothenate | 1.0 mg. |
| Nicotinic Acid Amide (Nicotinamide) | 20.0 mg. |

* Trademark, Reg. U. S. Pat. Off.

AVAILABLE IN BOTTLES OF 24, 100 AND 250

FINE PHARMACEUTICALS
SINCE 1886

Upjohn
KALAMAZOO • MICHIGAN

AT HOME OR AWAY SPOT TESTS SIMPLIFY URINALYSIS

NO TEST TUBES • NO MEASURING • NO BOILING

Diabetics welcome "Spot Tests", (ready to use dry reagents), because of the ease and simplicity in using. No test tubes, no boiling, no measuring; just a little powder, a little urine—color reaction occurs at once if sugar or acetone is present.

Galatest Acetone Test (DENCO)

FOR DETECTION OF SUGAR IN THE URINE FOR DETECTION OF ACETONE IN THE URINE

SAME SIMPLE TECHNIQUE FOR BOTH

1. A LITTLE POWDER 2. A LITTLE URINE

COLOR REACTION IMMEDIATELY

*Accepted for advertising in the Journal of the A.M.A.*

Write for descriptive literature

A carrying case containing one vial of Acetone Test (Denco) and one vial of Galatest is now available. This is very convenient for the medical bag or for the diabetic patient. The case also contains a medicine dropper and a Galatest color chart. This handy kit or refills of Acetone Test (Denco) and Galatest are obtainable at all prescription pharmacies and surgical supply houses.

Acetone Test (DENCO)... Galatest

THE DENVER CHEMICAL MANUFACTURING COMPANY

163 Varick Street, New York 13, N. Y.

filed for reference until the statute of limitation expires.

Unless these minimum requirements for occupational conditions are observed, the worker is not receiving adequate industrial medical care. These things he must have, because he is not only a member of the community, but an economic factor in integrated production. Collectively, workers represent millions of man-hours, and when they are ill or injured, billions of dollars are lost to employees and management alike.

So far, we have discussed only the in-plant care for workers suffering occupational injuries or illnesses. Why this is a specialized job for a medical supervisor is obvious.

### In-Plant Supervision

WHAT of the fact that 90% or more of conditions which affect a worker's efficiency occur outside and away from the plant? Does this imply that the industrial physician should look beyond the plant to see that proper medical care is supplied the worker for non-occupational conditions because of their effect upon his occupational efficiency? If he does so, he has the following choices:

1. To extend medical care through having a full-time staff employed by management take over complete medical supervision of the worker. This can be paid for by management, the worker, or both.

2. To extend this care still further to take in the worker's family, and thus achieve a maximum feeling of security from economic loss on the part of the worker.

3. To provide group insurance for workers so they may have partial reimbursement for loss of time and a freer choice of physician. There is one definite drawback to the average group insurance policy, in that most companies will pay bills rendered by any practitioner, whether an M.D. or otherwise, and there is justifiable doubt that this constitutes adequate medical care.

4. The industrial physician can utilize for his workers the services of such groups as the Blue Cross, the C.P.S., and others. This ideally should be supplemented by a personal knowledge on the part of the cooperating physicians outside of the plant of general conditions within the plant. Certainly, when these outside physicians suggest changes in conditions of work, these should be discussed with the industrial physician before they are adopted in the plant.

5. The industrial physician can work out a policy with the reputable members of the regular local medical society for the care of all non-industrial conditions which affect his workers' efficiency. These "outside" doctors will then constitutue an extension of the plant medical staff, or the plant medical staff can be considered an extension of the community medical group, specializing in in-plant medical care, and the two groups can work in harmony to the same end. Any form of group insurance can be utilized to assist in the payment for this service.

All of these and many more possible methods have been utilized. Some have been very successful, others not.

### Industrial Medicine as a Specialty

ONE thing, however, is certain. Industry has become so integrated, and the rules, the regulations, and the laws concerning workers have become so fixed that the industrial worker is, and will undoubtedly continue to be, a specialized problem no matter what his status when he is away from industry.

Thus, it seems apparent—gnashing of teeth to the contrary notwithstanding—that the general practitioner who "takes on a little industrial work" and his brother who is a "part-time industrial man" are one with the dinosaurs and dodos.

Recent scandals, such as occurred in New York City when many doctors were removed from insurance company roles for fraud, could have come about as a result of insufficient industrial medicolegal knowledge on the part of "part-time doctors," as well as from lack of scruples. No matter what the reason, such incidents will not be overlooked by the lay reformers who would regiment and control medical practice and are a strong point in their arguments.

The medical profession must recognize industrial medicine as a very real specialty which has developed as a corollary to changing economic and social conditions.

The medical profession must develop and train specialists for this work, and accept the leadership in development of proper programs for the care of workers, or we will play directly into the hands of other factions whose whole interest is not the providing of good medicine.

## LOCAL HISTAMINE THERAPY IN ARTHRITIS

The value of histamine for the relief of arthritic and rheumatic pain has been clearly established. Imadyl Unction 'Roche', through the vasodilating action of histamine—its chief ingredient—increases local circulation, stimulates metabolic processes and brings a sensation of comforting warmth to painful areas. In addition to histamine, Imadyl Unction 'Roche' also contains acetyl-glycol-salicylic ester 'Roche' and adequate amounts of methyl salicylate, thymol and synthetic menthol—all of which make Imadyl Unction one of the most rational remedies for the relief of arthritic and rheumatic pain. Supplied in 1½ ounce collapsible tubes.

HOFFMANN-LA ROCHE, INC., ROCHE PARK, NUTLEY 10, N. J.

*Imadyl Unction* 'ROCHE'

**Infra Red REFLECTOR BULB**

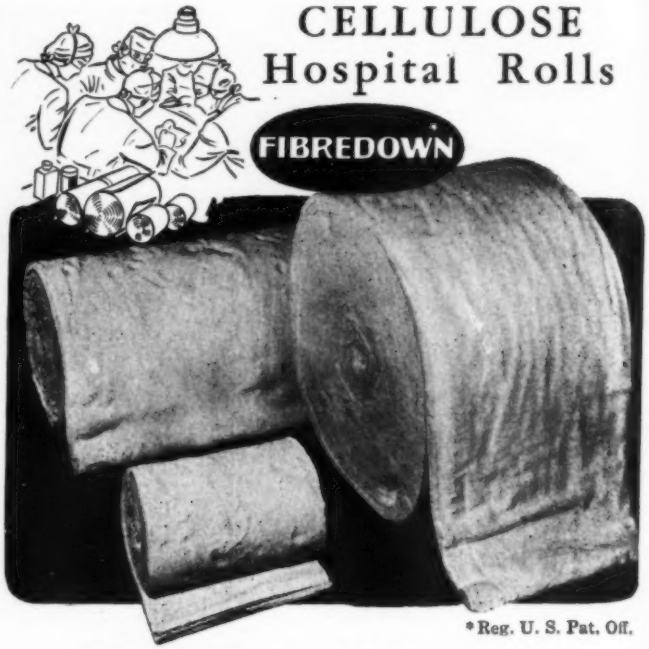
Use it to replace burned out element in doctor's infra red lamp, or prescribe it for home treatment. Replaces the electric pad. Fits any light socket. Complete with built-in reflector. List $10.75; Phys. list. $7.50. 30 day delivery.

SOLD ONLY THROUGH DEALERS . . .
SUBJECT TO TRADE DISCOUNT

*Write for Complete Information*

USCO MINNEAPOLIS PRODUCTS

U. S. MEDICAL SPECIALTY CO., INC.
223 S. 6th St., Minneapolis, Minn.



CELLULOSE
Hospital Rolls

FIBREDOWN

*Reg. U. S. Pat. Off.

FIBREDOWN* Hospital Cellulose is a highly absorbent, soft, resilient material. White in color it is available in standard size rolls or in any special sizes desired. Meets rigid requirements specified by the government and institutions. Your dealer has samples and prices. If he can not help you please write to us.

**The GENERAL CELLULOSE CO., Inc.**
GARWOOD, NEW JERSEY
Member: American Surgical Trade Association,
Hospital Industries Association and National Association of Manufacturers

## Tuberculosis in Industry

HOWARD W. BOSWORTH, M.D.,
*Los Angeles*

WHEN tuberculosis is not diagnosed until the patient is aware of symptoms severe enough to send him to the doctor, the disease is usually moderately or far advanced. Industrial surveys done through the use of miniature x-rays taken by the tuberculosis associations have proven that if tuberculosis is to be discovered in the early and curable stages, it must be done through the use of mass surveys and routine x-rays of population.

There are two points to be considered in discussing tuberculosis as an industrial hazard. One must be exposed to an open case, and infected, in order to contract the disease, or working conditions must be such as to aggravate a pre-existing infection. In the first group are those who are working in health, such as hospital employees, who are exposed to tuberculosis, particularly in general hospitals where they are in contact with unrecognized cases and no precautions are taken to protect them. (Tuberculosis wards, while a recognized hazard, now use a strict technique.) In the same group are those who are exposed in industry through fellow workmen who are open cases of tuberculosis. This is the most important group and by far the largest. The second group includes those who have had the pre-existing disease, and work under conditions which aggravate this to the point of reactivation. (In such instances it is not the type of occupation *per se* which is apt to cause the reactivation, but rather the imposition of a long work day, a long work week, inadequate rest, and insufficient nourishment to sustain the required energy output. Statistics and experience reveal few instances where an occupational environment itself causes the onset of reactivation of tuberculosis.) Many of the cases could be prevented if physicians would use sputum cultures and better laboratory work as a criteria for permitting convalescent patients to return to work; or would show sufficient interest in each individual case to advise the worker and cooperate with his employer in the selection of a suitable occupation.

One possible means of eliminating tuberculosis would be to x-ray the entire population of a given area at yearly intervals for five years, at the same time isolating and treating all communicable cases. The general practitioner and the radiologist can do much toward this.

Paralleling the case-finding work done through x-rays in the induction centers, the tuberculosis associations throughout the country have been working in industries. X-ray units permitting both 4 in. x 5 in. and 35 millimeter photographs of the fluoroscopic images of chests have been mounted in trucks and taken into industrial plants and housing units where there were no plant x-rays available, and, as a demonstration project, thousands of workers have been filmed. Demonstrable evidence of pulmonary tuberculosis has been found in from 1 to 5 per cent of the individuals x-rayed by this method, the average running about 3 per cent in most places. About one-half of these were found, on follow-up, to be active cases. These same surveys have uncovered a high percentage of cardiac cases which were undiagnosed prior to this examination.

The policy has been to notify the employee that there are abnormal findings in his chest, and suggest that he consult a physician and arrange for a 14 in. x 17 in. film to be taken. The need for better diagnostic work has been shown with a large number of persons who, after receiving the letter advising them to go to their physician, did so and were told that there was nothing wrong, and then subsequent laboratory examinations of the sputum revealed tubercle bacilli! This would indicate that more thought should be given to the proper handling of these survey cases; that less indifference and better cooperation should be exhibited by the family physician, and that communicable cases should be isolated.

There were 56,178 deaths from tuberculosis in the United States in 1943, of which California furnished 3,878

# Doctor: We want you to taste this palatable soda tablet

℞

ONE HUNDRED TABLETS
SIX GRAIN
CARBEX BELL
Trade Mark Reg. U.S. Pat. Office
Sodium Bicarbonate, Ginger and Aromatics
PROPERTIES: Antacid, Anti-Flatulent, Carminative.
DOSE: Two to five tablets dissolved in the mouth or in severe cases in glass of hot water.
Hollings-Smith Co.
Manufacturing Chemists
ORANGEBURG, NEW YORK, U. S. A.

*"Trial is Proof"*

Carbex Bell is made entirely of sodium bicarbonate and aromatics because our doctors tell us that sodium bicarbonate properly used is the fastest-acting and most dependable relief known for the symptoms of indigestion.

**SEND FOR SAMPLE**

HOLLINGS-SMITH CO. IM3-45
Orangeburg, N. Y.

Sample Carbex Bell, please.

Name ..... M.D.

Address .....


Public Library
Detroit, Michigan

# HELP!

For your hospitals and medical departments — Physicians, surgeons, nurses and technicians.

# HELP!

For yourself in finding that job in industry that you have been looking for.

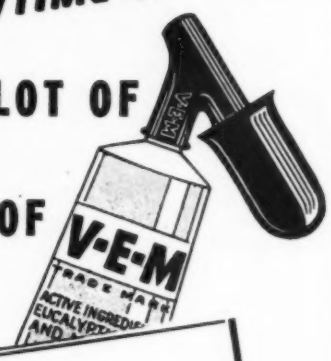
Established in 1926 for the purpose of serving the country's leading hospitals and industrial firms.

**NEW YORK MEDICAL EXCHANGE**
**489 Fifth Avenue**
**New York 17, N. Y.**
**(opposite Public Library)**
**Telephone: Murray Hill 2-0676-7-8**



GOOD TO REMEMBER ANYTIME OF YEAR—

THERE'S A LOT OF *COMFORT* IN A TUBE OF V-E-M




When your nose is stuffed up or irritated by common colds, steam heat, dust, smoke or fumes, a spot of V-E-M in each nostril makes it feel more comfortable.

Oil of eucalyptus
6¼ gr. menthol
1½ gr. in each av. oz.

**SCHOONMAKER LABORATORIES, Inc., Dept. IM • CALDWELL, N. J.**


and 7,869 new cases were reported, averaging two new cases for each death.

With a high percentage of these cases occurring in industry, it will take the cooperation of the private physician, the plant medical department, the volunteer agencies, as well as the local and state health departments, before this hazard can be controlled. Industry and our schools afford an excellent opportunity for mass surveys which, if combined with a proper follow-up system, will greatly reduce the incidence of tuberculosis in America.

## Venereal Disease Control in Industry


HAROLD T. CASTBERG, M.D.,
*Bureau of Industrial Health, California Department of Public Health, Berkeley*


AN INDUSTRIAL group presents an admirable opportunity for the control of communicable diseases in a substantial adult population. This is as true of the venereal diseases as it is of tuberculosis, smallpox, the common cold, or any other communicable disease.

The venereal disease problem in occupational groups is no greater than it is for the general public. Substantially, employed groups and their families represent, or rather are, the general public. Public health agencies have in the past directed their attentions to school groups because in such is an already prepared, homogeneous group to which mass case-finding surveys and educational programs can be applied. The same is true of an employee group in the approach to adults, and this fact is becoming increasingly appreciated by public health agencies.

The venereal diseases cannot be considered occupational or compensable diseases, except as medical and clinical personnel may contract them from handling patients. Industry, therefore, has little direct responsibility for their control, although it has a definite interest and stake in the problem. When it is realized that 90% of all lost time in industry due to illness and injury is from non-occupational causes, and that venereal diseases will be found in about 3% of the workers—in some racial groups the percentage may be as high as 10, 15, or 20%—industry is concerned from the point of view of effect on production.

Many public-health agencies have, in the last few years, seized the opportunity which industry presents, and have conducted mass serological case-finding surveys among industrial workers. These have brought to light many latent syphilis cases, and a few acute cases, and have, therefore, proved their worth.

On a single survey it is worthwhile to find a number of cases among a group of employees; but from a preventive medical point of view much is left undone unless a continuing program is established. There is always a labor turnover and, especially at the present time this turnover is very great. In a very short time the results of the survey will mean nothing as an indication of the situation regarding venereal diseases in that particular plant population.

### A Continued Program Needed

A CONTINUOUS program must be maintained by the plant medical service, and this can best be done by cooperation of the plant medical service with the community health agencies.

A program in an industrial plant involves:

1. Close cooperation with local and state venereal disease or health agencies.

2. Serological and other indicated examinations or tests to be made at the time of employment as a part of a preplacement physical examination.

3. Similar examinations and tests as a part of the periodic physical examination.

4. Refer the infected individual to a private physician or a public clinic

# VISIBLE *Success* IN PSORIASIS

Visible signs of success encourage both patient and physician to continue psoriatic treatment.

RIASOL not only earns such confidence on a basis of *visible performance,* but also makes full cooperation with "doctor's orders" easy in practice.

RIASOL (1) involves no "mess", is non-staining and washable, (2) is odorless, (3) requires no bandages, permitting patients to continue at work, (4) is an invisible, economical thin film in use, and (5) demands no expensive adjuvants.

RIASOL contains 0.45% mercury chemically combined with soaps, 0.5% phenol and 0.75% cresol in an emulsifiable vehicle.

To apply RIASOL, bathe affected parts with a mild soap and dry thoroughly. Apply daily for one week, then adjust to the patient's progress. RIASOL may be safely used on any area, including face and scalp.

Available in 4 and 8 fld. oz. bottles, at pharmacies or direct.

***ANNOUNCEMENT***

New 64-page brochure has been mailed to all physicians. Did you get yours? If not, send for a copy of this finely illustrated book TODAY.

***RIASOL is not advertised to the laity.***

***Before Riasol Treatment***

***After Riasol Treatment***

***Mail this coupon today and try Riasol on your next psoriatic case.***

**SHIELD LABORATORIES** IM-3-45

**8751 Grand River Ave., Detroit 4, Mich.**

Please send me professional literature and generous clinical package of RIASOL.

Public Library
Detroit, Michigan

M.D. _____ Street _____

City _____ Zone _____ State _____

Druggist _____ Address _____

# RIASOL *for* PSORIASIS

# VISION and SAFETY

Poor vision is often a contributory cause of accidents in certain occupations. Visual requirements are necessarily important on various types of industrial work.

## KEYSTONE

### INDUSTRIAL VISUAL SAFETY (IVS) TESTS

1. Reveal visual defects.
2. Indicate those that are probably remediable.
3. Furnish a basis for occupational placement for safety and efficiency.
4. Are used by leading industrial organizations.

*Write for complete information*

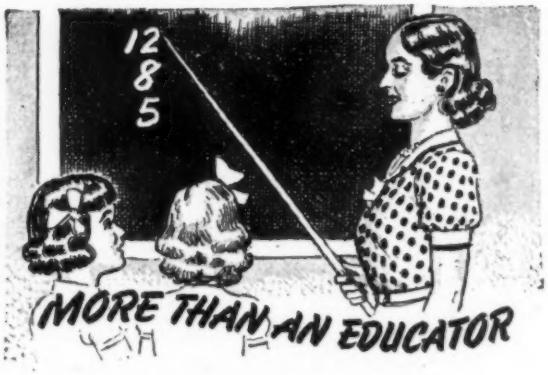
## KEYSTONE VIEW COMPANY

*Industrial Safety Division*

**MEADVILLE, PENNA.**

*PIONEERS IN STEREOSCOPIC VISION TESTING*






To properly take care of her charges, the teacher's first duty is to be functionally efficient.
At the first evidence of any irregularity she should consult her physician. In many instances he will prescribe

**HAYDEN'S VIBURNUM COMPOUND**

Many doctors have relied for their entire professional careers upon HVC for the relief of women needing anti-spasmodic and sedative therapy — HVC is non-narcotic.

*Literature* **HVC** *on Request*

NEW YORK PHARMACEUTICAL COMPANY
Bedford Springs Bedford, Mass.


for adequate treatment (time off should be allowed if necessary for the patient to go for treatment).

5. Report the cases found to the public health authorities for follow-up of possible contacts, to prevent further spread.

6. Careful follow-up of the individual case by the industrial medical department to assure adequate and consistent treatment.

7. Judicious supervision of placement of the patient undergoing treatment by the industrial medical department. (All employees who are found to have venereal diseases must not be discharged or refused employment.)

8. Education of the workers on the venereal diseases by personal interview in the plant medical department, and also through an organized educational program.

This education should include knowledge on how the diseases are acquired, how they may be prevented, the effects of the diseases in early and late stages if treated or untreated, and the economic factors involved in their treatment.

## The Place of Dentistry in Industry

HUGO M. KULSTAD, D.D.S.,
*Los Angeles*

DENTISTRY has long been aware of its inseparable part in the overall health service of the inivdidual, and in order that it may assume its share of responsibility in the health field, it is first necessary that medicine recognize the entire problem. This is particularly true of health service in industry, since such service is administered by the medical profession, and rightly so. However, until the present war, when the necessity of having every man, woman, and youth constantly on the job, very few industries utilized a dental program.

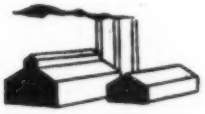
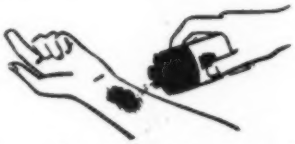
Until two years ago the American Dental Association assigned the problems of industrial dentistry to several committees, particularly the Economics Committee. However, at that time, under the Council on Dental Health, an Industrial Committee was established. It is composed of four dentists with knowledge or interest in industrial dentistry, and a consultant, Carl Peterson, M.D., Secretary of the Council on Industrial Health of the A.M.A. Last year, the chairman of this newly-formed committee was invited to attend the annual meeting of the Council on Industrial Health in Chicago. This indicates the growing tendency to recognize dentistry in our industrial health programs.

The justification for a dental program in industry is apparent. We know that most absenteeism is of non-occupational origin. Also, the greater portion of both occupational and non-occupational absenteeism is complicated and aggravated by dental disease. Estimates of percentages of those suffering from tooth infection, gum infection, or both, among adult employee groups, run from 65 to 95%.

Whenever a complete health service, dental and medical, exists in an industry, conclusive proof is available to show that, by controlling dental infection, a material reduction in all lost time results. This experience should impress the industrial executive with the fact that an industrial dental program is an economic measure, and an important factor in efficient production.

In a recent study made by Dr. Ernest Sloman, Dean of the Dental School of the Physicians and Surgeons College, San Francisco, he has shown that, throughout the United States, dental care costs 26 cents of each dollar spent for health. It is hard to conceive any complete health care plan that could ignore these facts. If only 25% of our people are getting dental care, and this is costing approximately 25% of each dollar spent on health, how can a medical department in industry function without a dental department?

More emphasis must be placed upon oral hygiene in the preplacement (pre-

In the first-aid stations and medical departments of large  and small industrial plants, 'B·F·I' has become a "must"--for it is so convenient, handy and ready for immediate use in the treatment of cuts, abrasions, burns, chafing, scratches  and other minor wounds and skin irritations. Dusted on liberally, 'B·F·I' brings almost immediate relief to tired, burning, weary feet, and is of proven value in the treatment of epidermophytosis (athlete's foot). It promotes healing without caking or forming hard crusts--an ideal antiseptic, dry, surgical dressing. 'B·F·I' Powder is supplied for "industrial use" in a ½ pound combination sprinkler-top and dispensing package. Also available in ¼ ounce and 1¼ ounce sprinkler-top packages.

Sharp & Dohme, Philadelphia 1, Pa.

# B·F·I POWDER

ANTISEPTIC FIRST-AID DRESSING AND SURGICAL POWDER

'PEP-UP' Tablets

Keep me feeling "TOPS" in Hot Weather

Your workers can take "Pep-Up" Salt Tablets in desired amounts with no fear of "Salt Sickness" or nausea. Enteric coating prevents dissolution of tablets in stomach and "Salt Sickness" is positively avoided. More of your workers will take "PEP-UP" Tablets because they do not fear nausea or upset stomach and the red candy coating gives them an attractive and appetizing appearance. Your employees will appreciate safe, sanitary enteric and candy coated "PEP-UP" Tablets and will be more efficient workers when they take them regularly.

THE "EXPENDABLE" DISPENSER

"Pep-Up" Tablets can be purchased in bulk, in boxes of 1000 or in "Expendable" dispensers. No need for cleaning and refilling dispensers. Throw away the "Expendable" when it is empty and hang up a new one. More sanitary—more economical. Write for literature and prices.

SHIELDS LIFE AND PROPERTY

UNITED STATES SAFETY SERVICE CO.

3613-17 Broadway Kansas City 2, Mo.
Branches: St. Louis, Tulsa and Houston



KLO-SAVER APRONS

TRADE MARK

(WATER—ACID—ALKALI—REPELLENT)

Protek-Flap Down

Protek-Flap Up

S-4014

Strong serviceable apron—42" long—32" wide

Dark Green—Used in autopsy room—x-ray—treatment room and laboratory ..... Per Doz. $17.50

Without Protek-Flap ..... Per Doz. $16.50

Progressive Laboratory Specialties Company

146-16 Hillside Ave. Jamaica 2, N. Y.

JAmaica 6-2863


employment) and periodic examinations of all workmen. Furthermore, it should be an efficient examination. Dental examinations made with tongue blades have been proven valueless. In fact, the dental profession now recognizes that the only worthwhile examination is one in which x-ray, mouth mirror, and probe have been used. Therefore, it follows that a dental division of the medical department must not only be manned by a dentist, but he must have proper equipment to function effectively.

An eastern war plant has undertaken a survey to establish the relationship of a good dental health program to the general health and efficiency of its workers, and the reduction of absenteeism. To date, the findings are astounding, and when the completed results are made public, they will serve further to emphasize that when industrial medicine includes industrial dentistry, then it may be truly designated as industrial health.

## The Treatment of Soft-Tissue Injuries of the Hand

IN INDUSTRY, the incidence of soft tissue injuries to the hand is alarmingly high. Since these injuries are extremely susceptible to infection, often leading to such complications as permanently-impaired function of the part, amputation, or even loss of life, their treatment is a major procedure. Especially is it imperative that the patient with a severed nerve or tendon be hurried to a hospital where the best surgical facilities are available. The repair of this type of laceration should be done within the first six hours following injury, for delay invites infection, and consequently prevents or retards healing.

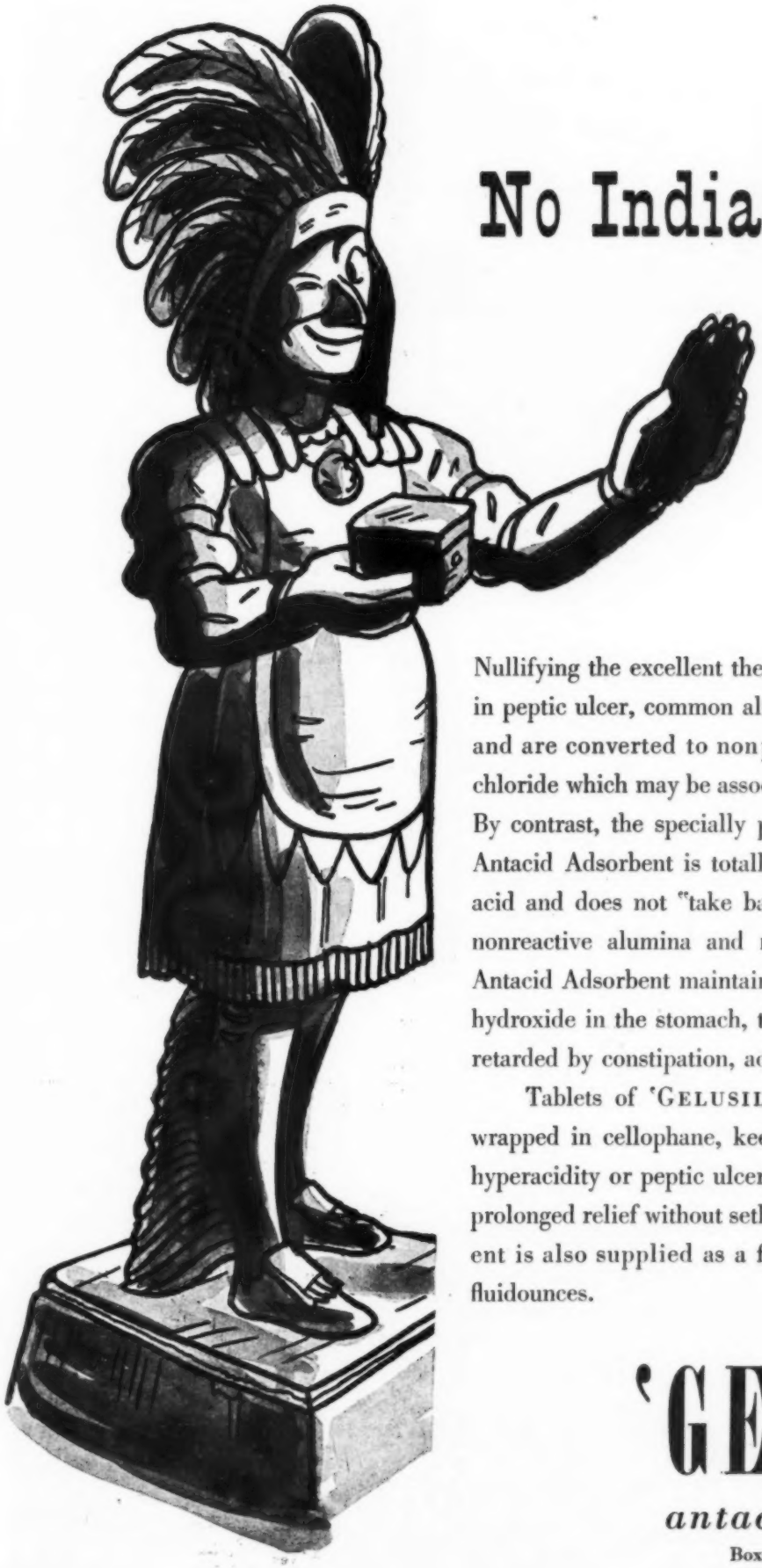
In wounds where the time interval following injury has been longer than six hours, the decision as to operative procedure is influenced by certain factors. If the wound is greatly devitalized and obviously dirty, a simple dressing is applied without attempt at repair; or, if the delay has been longer than twenty-four hours, primary suturing of the nerves or tendons should not be done. On the other hand, primary suturing of the nerves or tendons can often be done after twelve hours, or even up to twenty-four hours if, at the time of injury, the first-aid treatment consisted of the implantation of sulfanilamide, and the application of sterile dressings, and if the wound appeared clean.

### Operative Procedure

PREPARATION of the extremity to be operated upon consists of shaving the area around the wound, and cleansing with soap and water. The entire extremity is then painted with equal parts of tincture of iodine and alcohol, save the wound itself, which has been covered with sterile gauze. The arm is elevated, sterile towels are wrapped about it, and an Esmarch bandage is applied. This bandage is wrapped about the extremity to a point one and one-half inches distal to the blood pressure cuff, which has been previously applied to the upper arm. The cuff is then inflated to 300 mm. of mercury pressure and both tubes clamped. (This type of tourniquet may be left on as long as one and one-half hours without injury to the nerves). The Esmarch bandage is then removed. Local, or block anesthesia, of 2% novocain (or in prolonged cases, a general anesthesia) is administered. Adrenalin is never used in digital block anesthesia, because prolonged ischemia may result in necrosis. The wound is then sterilized with equal parts of iodine and alcohol, but the wound *should not be* washed out with saline, sterile water, or other solutions, as is frequently practiced. It is Boehler's opinion that solutions wash foreign particles deeper into the wound and only leave a false impression as to what constitutes surgical asepsis. It is now generally accepted that the technique of wound excision, as described by Boehler[1] has reduced the incidence of infection in this type of injury.

Complete excision of the wound is accomplished by beginning at one

The author, being in military service, desires to remain anonymous.



# No Indian Giver

Nullifying the excellent therapeutic action of alumina therapy in peptic ulcer, common alumina gels react with gastric HCl and are converted to nonprotective, astringent aluminum chloride which may be associated with distressing constipation. By contrast, the specially processed alumina in 'GELUSIL'* Antacid Adsorbent is totally resistant to gastric hydrochloric acid and does not "take back" the good it does. Containing nonreactive alumina and magnesium trisilicate, 'GELUSIL' Antacid Adsorbent maintains demulcent, protective aluminum hydroxide in the stomach, thus permitting normal healing unretarded by constipation, acid rebound or alkalosis.

Tablets of 'GELUSIL' Antacid Adsorbent, individually wrapped in cellophane, keep the ambulant victim of gastric hyperacidity or peptic ulcer on the job, providing prompt and prolonged relief without setbacks. 'GELUSIL' Antacid Adsorbent is also supplied as a fluid gel, in bottles of 6 and 12 fluidounces.

*Trademark Reg. U. S. Pat. Off.

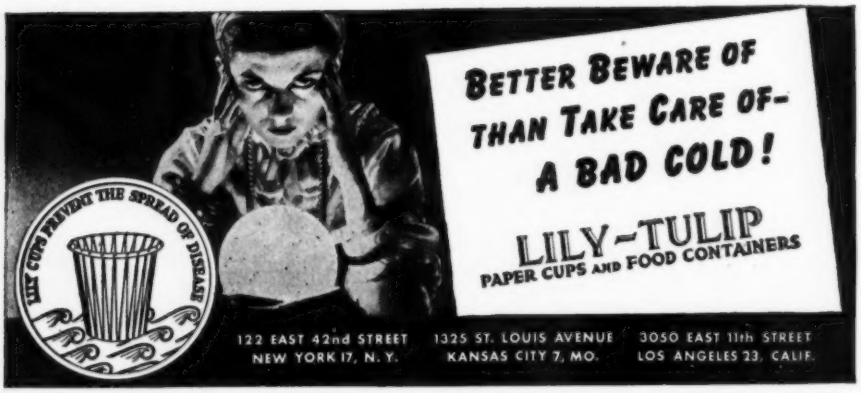
# 'GELUSIL'

*antacid adsorbent*

Boxes of 50 and 100 tablets

OMNIS ORBIS
WARNER
ESTABLISHED 1856

WILLIAM R. WARNER & CO., INC., 113 West 18th Street, New York 11, New York


BETTER BEWARE OF
THAN TAKE CARE OF-
A BAD COLD!
LILY-TULIP
PAPER CUPS AND FOOD CONTAINERS
LILY CUPS PREVENT THE SPREAD OF DISEASE
122 EAST 42nd STREET
NEW YORK 17, N. Y.
1325 ST. LOUIS AVENUE
KANSAS CITY 7, MO.
3050 EAST 11th STREET
LOS ANGELES 23, CALIF.

edge, removing approximately ⅛ of an inch in thickness across its base, including ⅛ of an inch of the skin border on the opposite side, but sparing tendons, blood vessels, and nerves. The ends of the injured nerves and tendons are cut off sharply, and soiled portions of bone are removed by means of a chisel or gouge. By this procedure, all the iodine is completely and systematically removed, as well as all particles of dirt and devitalized tissue. The potentially-infected wound thus becomes more nearly aseptic, and more nearly free of irritating chemicals. All remaining structures are potentially viable. After such an excision of the wound is accomplished, the instruments used are discarded and fresh drapes are applied. A new set of sterilized instruments is then brought into use.

Before removing the tourniquet, all structures that need repair, such as tendons and nerves, should be identified. After its removal the wound is covered with sterile gauze and manually compressed; bleeders are identified and tied off with triple "O" catgut following which the operator is free to complete the suturing of all severed structures. Before describing this technique, it should be stated that nerves, bones, and joints should be covered, since these structures do not remain viable if left exposed. Skin flaps from adjacent areas may be utilized. Defects resulting from the transposition of these flaps may then be filled in with Thiersch skin grafts.

### Tendon Sutures

THE ENDS of severed extensor tendons can, in most instances, best be approximated by means of No. 35 stainless steel wire, as advocated by Bunnell.[2] The double figure-of-eight suture is used, and the skin borders overlying the tendon are approximated by the continuation of this suture in the form of a mattress stitch through the skin. The skin borders of the remaining portion of the surgical incision are then approximated by intermittent mattress sutures of silk supported by a continuous running suture of No. 35 stainless steel wire. The use of stainless steel wire has been noted consistently to provide very little or no reaction, as compared to other materials. Sulfanilamide may be implanted in the wound before closure. Either tetanus toxoid or tetanus antitoxin is administered in all such injuries.

The flexor tendons, when severed, yield the poorest result, since they are enclosed in a tunnel-like sheath. Because of the firmness of this tunnel, the swelling following surgery impairs the blood supply and the structures may subsequently become ischemic or necrotic. The tendon may also become fixed by a firm scar, resulting in a stiff finger and loss of function. For this reason the sheath should be divided on its lateral surface. It is also preferable to use a suture material which produces the least reaction, as well as to approximate the severed tendon ends with as simple a stitch as possible.

Where flexor tendons of the fingers and hand are severed at the same level, it may be advisable to remove the flexor sublimus tendon, and suture only the flexor profundus. The latter can be accomplished by means of placing a wire suture through the proximal and distal portions of the tendon. This suture, in turn, is brought out through the tendon sheath and the skin at a point distal to the site of severance, and fixed by tying the knot over a small piece of rubber tubing, or to the nail of the involved digit. The pull-out wire passed through the proximal loop of the suture is brought out through the tendon sheath and skin. Likewise, this suture is fixed by tying it over a small piece of gauze, or rubber tubing, proximal to the site of repair. These sutures remain in place for a period of three to four weeks. If a pull-out wire is used, the entire suture can be removed from the tendon, after healing takes place. Should infection interrupt healing, the suture can be removed at any time. If stainless steel wire is not available, standard methods of suture can be carried out utilizing Deknatal No. 2 silk. If only the sublimus tendon is severed, it need not be sutured, since it is not essential for good function and only serves to balance the flexor mechanism of the finger.

### Nerve Repair

NERVES are sutured with fine silk, using a small, straight needle. The severed ends are approximated by means of interrupted fine sutures taken at regular intervals about the circumference of the nerve sheath. Passing sutures through the nerve substance is avoided, and the approximated ends should never be under tension.

After completing the treatment of the wound in all its manifestations, it is advisable to elevate the injured extremity by means of an aeroplane splint until acute swelling has subsided. This relieves compression of tissue, especially nerves and blood vessels, by gravity edema. It also decreases pain and hastens recovery.

### References

1. BOEHLER, L., The Treatment of Fractures, John Wright and Sons (Bristol), 4th Ed., 1935.
2. BUNNELL, S., Treatment of Tendons in Compound Injuries of the Hand, *J. Bone & J. Surg.*, 23:240, 1941.

## Industrial Urologic Injuries

ALEXANDER H. PEACOCK, M.D.,
*Seattle, Washington*

INDUSTRIAL injuries to the genitourinary tract involve primarily the kidney, bladder, urethra, and scrotal contents. Only occasionally does an industrial injury concern the ureter, prostate, seminal vesicles, vas deferans, penis, or foreskin.

### Renal Injury

THE kidney may be injured by a direct blow, compression of the abdominal contents, or falls from a height, resulting in a direct contusion to the kidney or from fractured ribs piercing the kidney. Falls upon the

SACRO-ILIAC BELT
*IT'S NEW . . . IT'S CORRECT . . . IT SUPPORTS*
THE STRAP SACRO-ILIAC BELT
KEEPS MAN AND WOMAN POWER ON THEIR FEET
In sacro-iliac disability the strain, slip or movement occurs in that articulation. Correct support can be accomplished by holding thru the articulation with the two-inch non-elastic belt and pad. The pad takes pressure OFF the sacrum, which moves in lesion. Perineal strap holds the belt in place. Trauma, toxic relaxed ligaments and one foot standing or pushing are the common causes of sacro-iliac lesion. Wear the belt below the iliac crests over the articulations. For belt length add 2 or 4 inches to measurement taken below crests. ORDER DIRECT. Keep a supply for immediate use. $3.00 each, complete.
SACRO-ILIAC BELT CO. AUDUBON, IOWA

# EMERGENCY CALL!

## MEDICS BAIL OUT TO AID CUT-OFF U.S. BATTALIONS

SUPREME HEADQUARTERS, Allied Expeditionary Forces—By parachute and by glider, Army surgeons went to the aid of the gallant garrison of beleaguered Bastogne.

The surrounded lost their only hospital in one of the first German attacks. With more than 800 wounded, the commanding officer radioed for medical aid. The response came immediately. Medics and medical supplies went in by parachute, by glider, and in Piper Cub planes.

FROM Bastogne to Leyte, the story is being repeated over and over again—of Army doctors, braving the battle hazards of the front line, risking *their* lives to *save* lives.

Emergency call? *Every* call is an emergency call to these *heroes in white.*

And with the Army doctor, as with the fighting men they care for, rest is often limited to a few moments of relaxation and a good cigarette. A Camel cigarette, more than likely, for Camels are the favorite with men in all the services, according to actual sales records.

BUY WAR BONDS STAMPS

# CAMELS

**COSTLIER TOBACCOS**

R. J. Reynolds Tobacco Co., Winston-Salem, N. C.

feet, or upon the buttocks, have caused tears to the kidney or capsule.

Type I—A tear of the true capsule with resulting hematoma.

Type II—Mild contusions of the parenchyma, without gross signs of injury, occur with the symptom of pain and the finding of microscopic red-blood cells.

Type III—Superficial tears of the parenchyma are not uncommon. They usually are transverse and irregular, and do not extend deeply into the kidney.

Type IV—Deep tears, pulpefaction, or severing of the renal artery or vein; these are the most serious of renal injuries.

Ninety per cent of all kidney injuries fall under Type III.

Renal tears may result in scars, cicatricial tissue, hydrocalyx, hydronephrosis, chronic renal infection, or extravasation of blood and urine in the perirenal tissues.

## Diagnosis

IT IS of the utmost importance to diagnose a renal injury early and determine its degree. The outstanding symptom is hematuria; this occurs in 90% of cases, and it is usually early. The degree of the bleeding when present indicates the severity of injury; for example, a light staining, or merely microscopic blood cells, indicate a slight tear, provided the ureter is not plugged with a blood clot. Massive hematuria, a falling blood pressure, and shock point to a severe injury. Pain is usually present. It is often a typical renal colic with localized tenderness. As the hemorrhage progresses, a palpable tumor may form in the renal fossa. Accompanying this tumefaction is muscle spasm or rigidity.

Early in the picture there may be symptoms of shock. There may be no local evidence of hemorrhage and nothing to indicate it except hematuria. Patients who show signs of shock and/or hemorrhage bear the most critical watching. Half-hourly blood pressure readings are important in detecting a continuing hemorrhage. Fortunately clotting, intrarenal tension, and lowered blood pressure come to the patient's rescue. Many of the torn renal vessels are thus plugged with clots.

Excretory urograph is frequently, but not always, of value in determining the degree of injury. The affected organ may reveal an extravasation or show poor function. Due to shock, poor excretion of urine is the rule. Retrograde pyelograms are not usually recommended. Ureteral catheters and contrast media can readily displace a clot and further contribute to hemorrhage. Cystoscopy alone can easily add to the patient's shock. These examinations should be reserved until the patient is out of danger.

In summary, the diagnosis of renal injury is characterized by hematuria, unilateral renal pain, localized tenderness, muscle rigidity, and tumefaction.

## Treatment

TREATMENT is readily divided into expectant and operative.

*Conservative or Non-operative Treatment.*—As pointed out earlier, most kidney injuries fall into Types I, II, and III—tears of the capsule, contusions, and superficial tears. A mild hemorrhage takes place, clotting closes the open vessels, and absorption of the extravasated blood restores the kidney to its original form and condition. Therefore, in order not to disturb clotting, it is important to keep the patient perfectly quiet, and not to allow him to roll, twist, or bend the body. Warmth and blood plasma are often necessary for shock, and when there is hemorrhage, blood transfusion may also be needed. Often the pulse rate and blood pressure become well stabilized, and the patient goes on to a complete recovery. Again, it is best not to allow too much body movement until it is reasonably certain that all bleeding has been permanently checked. Ten days to two weeks of bed rest should be required after the last disappearance of the hematuria.

*Operative Treatment.*—Surgery is indicated when the hemorrhage persists or threatens the patient's life. Increased pulse rate, falling blood pressure, and severe pain are indications for exploration. The development of fever, chills, and tumor formation in the costovertebral angle, along with continued hematuria, may call for surgical intervention several days after the injury. It must also be realized that a tear of the renal artery or vein can quickly result in death. Most renal bleeding is arrested by normal clotting.

Suturing of severe kidney lacerations is not satisfactory, even with ribbon gut. Nephrectomy is much surer and safer, should the kidney be hopelessly torn. We have all seen cases where shock prevented immediate surgery or exploration, and the patient, after weeks of hospitalization, went on to recovery and restoration of function of the damaged organ. When surgery is necessary, it is good policy to wait until shock is over. Statistics show that operative treatment has a much higher mortality than conservative expectant treatment. On the other hand, Lowsley states, "I believe it is conservative to operate early." After all, judgment and experience must be applied to each of these injuries of the urinary tract. There can be no hard and fast rules.

**For**

**Compensation**

**and**

**Liability Questions**

**See**

**GRAY'S ATTORNEYS' TEXTBOOK OF MEDICINE**

**By**

**ROSCOE N. GRAY**

*Surgical Director of Aetna*

**1 large volume $16.50**

**Send for approval copy**

**Matthew Bender & Company**

**109 State St. Albany, N. Y.**

## Rupture of the Bladder

THE two most common causes of this accident are direct blows to the abdomen with the bladder full, and crushing accidents to the pelvis, as in falls, the pelvis being caught between cars or heavy objects, etc. The latter can cause a springing apart of the pubic bones due to fracture through the sacrum, or a splintering of the rami and puncturing of the bladder with sharp bone splinters. These ruptures may be extra- or intraperitoneal; the latter, of course, being more serious. The symptoms usually develop early. Bleeding from the penis, voiding bloody urine, suprapubic pain, rigidity of the lower abdominal muscles, and shock are of frequent occurrence.

*Diagnosis.*—Early diagnosis is possible by air or contrast media cystograms, excretory urograms, or cystoscopy. The cystograms of air are preferable. As the hours pass, pain and suprapubic tenderness increase. The abdominal muscles become splinted and board-like. The pulse rate goes up. Ecchymosis over the pubic bones, the scrotum, or perineum point to a severe injury. On the other hand, a case of intraperitoneal rupture of the bladder was seen a few years ago in which the abdomen was perfectly soft for three days. The patient voided clear urine, and yet died of peritonitis from a small rent in the dome of the bladder.

If the patient cannot void, and if a catheter cannot be passed to the bladder, it is evidence that the membranous urethra has been severed. The patient should attempt to void, and, if he cannot, catheterized specimen of urine should be examined for red blood cells. If there is any question of diagnosis, the condition should be treated as a potential rupture.

An indwelling urethral catheter may clear up the picture. At times, a contusion of the urethra, with mild bleeding, will be cleared up by such a catheter. A cystogram can be made at the same time.

*Treatment.*—Treatment of a ruptured bladder is most obviously one of early surgery. Hinman states:

## THE ELDERLY WORKER

## *and His Nutritional State*

With the steady increase in the average age of industrial workers, new problems are presented to the industrial physician whose duty it is to maintain optimal health for maximal productivity. In the sudden change from sedentary or less arduous living, eating habits must be altered to provide for complete satisfaction of the increased nutritional needs. Hence extra feedings are often necessary in order to compensate for the common practice of eating small meals at the customary hours.

As a supplementary ration, Ovaltine has many worthwhile advantages. Made with milk, this delicious food drink is high in caloric value and provides the nutrients particularly needed by workers: readily metabolized carbohydrate, biologically adequate protein, highly emulsified fat, B complex and other vitamins, and essential minerals. Ovaltine, digested with remarkable ease, is a refreshing drink, and is equally enjoyed either as the mealtime beverage or as part of a between-meal snack.

**THE WANDER COMPANY, 360 N. MICHIGAN AVE., CHICAGO 1, ILL.**

*Ovaltine*

**Three daily servings of Ovaltine, each made of ½ oz. Ovaltine and 8 oz. of whole milk,* provide:**

| | | | |
|---|---|---|---|
| PROTEIN | 31.2 Gm. | VITAMIN A | 2953 I.U. |
| CARBOHYDRATE | 62.43 Gm. | VITAMIN D | 480 I.U. |
| FAT | 29.34 Gm. | THIAMINE | 1.296 mg. |
| CALCIUM | 1.104 Gm. | RIBOFLAVIN | 1.278 mg. |
| PHOSPHORUS | .903 Gm. | NIACIN | 7.0 mg. |
| IRON | 11.94 mg. | COPPER | .5 mg. |

***Based on average reported values for milk.**

"Ruptured bladder is one of the few emergency urologic operations. It should be operated on within a few hours." All surgeons urge early cystotomy, for the mortality is high—25 to 45%—and rapidly increases as the post-traumatic hours progress. Even with all our roentgenographic aids, it is not always possible to diagnose rupture of the bladder; so, when in doubt, operate if the patient is not in shock.

### Rupture of the Urethra

RUPTURE of the urethra occurs chiefly in crushing of the pubic arch and blows delivered to the perineum, as in straddle falls. The symptoms are bleeding from the meatus, inability to urinate, and inability to pass a catheter. There is usually the distress of an over-distended bladder, tenderness of the site of injury, and ecchymosis. As time elapses, edema takes place, and invasion of the scrotum or perineum with blood and urine occurs. Infection follows.

*Treatment.*—The only treatment is operative. There is the choice of suprapubic cystotomy, drawing a catheter through the severed urethra, or external urethrotomy. In the latter treatment, an attempt can be made to suture the severed urethral ends.

There are other industrial urologic injuries, such as those of the penis, scrotal contents, prostate, and vesicles. The more usual injuries, however, are the ones considered above.

It is emphasized that conservative treatment gives the best results with kidney injuries, and very early surgery is important in bladder or urethral ruptures.

---

## Hand Fractures in Industry

C. C. CUTTING, M.D.,
*Permanente Foundation Hospital, Oakland*

THE HAND, a tremendously important organ to any workman, is subject to a high incidence of injury, and deserves a great proportion of industrial medical attention. Because of the extreme importance that all possible function be restored after an injury to the hand, even small and apparently insignificant injuries must be respected, and receive careful and intelligent care. Lacerations and contused wounds, even though apparently minimal in extent, may communicate with tendon sheaths, joint spaces, or closed compartments which have poor tissue resistance to infection, but infections of which may lead to severe disability. Early definitive care is imperative, and should include immaculate cleansing with soap and water, thorough debridement, local sulfonamide application, closure without drainage, and adequate immobilization.

Fractures of the skeletal structures of the hand present a particularly serious problem, since they may lead not only to deformity of the bony structure, but their close proximity to tendons and joints may markedly limit the function of these structures as well.

### Fracture of the Terminal Phalanges

FRACTURES of the terminal phalanges occur more frequently than fractures of any other bones of the body. Fortunately, there is little tendency toward separation of the fragments, and disability from this injury is rare. Immobilization for two weeks by a protective metal finger splint will usually be sufficient. Compounded fractures of the terminal phalanges may shatter the bone and the removal of separated fragments should be included in the debridement. Removal of sufficient bone to allow a well-padded, soft-tissue flap on the end of the bone is far superior to attempts at skin grafting. It is frequently advisable to remove the proximal third of the nail in compound injuries involving this region. This procedure allows free drainage of infection about the eponychium, decompresses painful subungual hematomata, and may result in a smoother second-nail growth.

A special problem of the terminal phalanges is the so-called baseball fracture, or avulsion, of the extensor tendon with displacement of a chip from the articular surface of the terminal phalanx. Usually the extensor tendon does not retract and immediate fixation in plaster, maintaining the distal joint in hyperextension and the proximal interphalangeal joint in flexion for six weeks, is the treatment of choice. The results of those injuries which include a chip fracture are, as a rule, much better than those consisting of tendon avulsion only. The results from open reduction are less favorable than those with closed treatment, instituted early.

### The Middle and Proximal Phalanges

THE displacement of the fragments following fractures in these regions may require immobilization with the finger in either flexion or extension, as dictated by x-ray appearance. In general, fractures distal to the middle of the shafts of those bones will require fixation in flexion.

Skeletal traction is usually indicated in comminuted or compounded fractures of these bones, and should be applied in line with the desired position of the finger.

Compounded fractures of these regions present the poorest end results of this entire group of fractures, because of tendon adhesions and joint fixations. Immobilization time should be minimum, and active motion can be instituted in two to four weeks.

### Fractures of the Terminal Phalanges

THE first metacarpal is frequently fractured near its base and may be of two general types. The transverse, impacted type, not involving the carpal-metacarpal joint, does not require traction, and simple correction of the adduction deformity by disimpaction and abduction is sufficient. Those fractures of the base of the first metacarpal, extending obliquely into the joint, are unstable, usually shortened and require skeletal traction for about four weeks.

Fractures of the metacarpal shafts usually result in dorsal angulation, because of the stronger pull of the flexor muscles, and should be maintained in well-moulded plaster, incorporating at least the neighboring fingers. The fingers themselves may be in partial flexion, but should be supported by the cast, which fits firmly beneath the metacarpal heads. These fractures are prone to be oblique and to shorten, and again skeletal traction should be applied and maintained to overcome all over-riding.

Fractures at the neck of the metacarpal often present a difficult problem. Impaction should be broken up and padded pressure applied within the cast. Acute flexion of the finger, and upward pressure in line with the proximal phalanx, may obtain a reduction otherwise impossible to achieve. The metacarpo-phalangeal joint is especially vulnerable to puncture wounds, which require immediate and adequate debridement.

CONCLUSION: In general, emphasis should be put on the following:

1. Early definitive care of fractures to the hand to a point that they are considered a surgical emeregency.
2. Accurate reduction, and traction when necessary.
3. The use of non-padded, well-moulded plaster casts which obtain maximum immobilization of the fragments, and yet allow maximum function and use of the non-injured portions of the extremity. Use of the uninvolved portions of the hand during immobilization should be encouraged, for it will greatly speed recovery and lessen disability resulting from fractures of the hand.

---

A "FITNESS for Living" meeting was held at Newark on January 26 by women of New Jersey schools and industries. A panel discussion was presented on health, physical fitness, recreation, safety, psychiatry and counseling of women from the standpoint of the way schools prepare them and industry absorbs them . . . A DERMATOLOGICAL study of a New Jersey plant manufacturing cashew nut shell oil products was conducted by DR. LOUIS SCHWARTZ and his staff, accompanied by members of the Bureau of Industrial Health, in February. One of the prime purposes of the study was to compare the sensitization properties of the active ingredients of cashew nut shell oil and poison ivy. . . . A QUESTIONNAIRE on industrial medical facilities has been mailed to 1500 New Jersey industries by the Bureau of Industrial Health. The data received will be used in appraising the industrial medical services of the state. A roster of New Jersey industrial physicians and nurses will also be prepared from this information.

# For wartime working efficiency

Pluravit, the "different" multiple vitamin supplement, was developed especially for industrial workers.

The daily Pluravit ration is only one pellet per day per worker. Experience has demonstrated that this will effectively prevent vitamin deficiency. As a result workers not only enjoy better health but are likely to find greater enjoyment in working, so that production can be maintained at peak levels.

Available in convenient, sanitary cellophane pouch containing 7, 14 or 28 pellets (for one, two or four weeks' supply), in bottles of 30, 100 and 1000 pellets.

**One PLURAVIT pellet contains:**

| | |
|---|---|
| Vitamin A | 4000 U.S.P. units |
| Vitamin $B_1$ | 2 mg. (666 units) |
| Vitamin $B_2$ | 2 mg. |
| Vitamin $B_6$ | 0.5 mg. |
| Calcium Pantothenate | 1 mg. |
| Niacinamide | 20 mg. |
| Vitamin C | 50 mg. (1000 units) |
| Vitamin D | 1000 U.S.P. units |

WINTHROP

**PLURAVIT**
Reg. U. S. Pat. Off.

*Winthrop Chemical Company, Inc.*
INDUSTRIAL DIVISION
NEW YORK 13, N. Y. WINDSOR, ONT.

ARMY E NAVY

## INDUSTRIAL HEALTH and DISEASE

# Industrial Medicine and the General Practitioner

C. F. YEAGER, M.D.,
*Medical Director, Remington Arms Co., Bridgeport,*
*Chairman, Committee on Industrial Health,*
*Connecticut State Medical Society*

THE development and expansion of medicine in industry during the past several years have been so great that industry itself is somewhat bewildered. We can hardly expect the general practitioner, therefore, to be fully conversant with the present day scope of industrial medical practice. In this paper, I will attempt to show how the general practitioner fits into the new era of industrial medicine. In order to do this I must first explain some of the reasons why industry has gone into medicine. I might say that I will explore for you this business of "doctoring in industry"; and for this purpose I will divide the development of industrial medicine into three eras.

Presented at the Queens County Medical Society, Forest Hills, New York, October 30, 1944, published in *Connecticut State Med. J.*, 9:2, 81-84, February, 1945.

The first era began with the adoption of workmen's compensation laws which, as you know, made it mandatory on the part of industry to carry insurance which would pay the expenses in connection with the treatment of occupational injuries (and in some states, occupational diseases) and to compensate the injured for loss in wages. This placed quite a financial burden on industry. Since the individuals who own and manage industry are fundamentally business men, they immediately set about to find ways and means of reducing their compensation insurance costs. In order to do this, two things were necessary: (1) to provide immediate first aid to the injured; (2) to prevent accidents.

The first objective was accomplished by providing first aid or dispensary facilities in plants, supervised by a trained person in first aid or a nurse. This service was supplemented by having a physician, or panel of physicians on call. Needless to say, these original industrial physicians were, for the most part, surgeons. In industries where this type of medical service was instituted, compensation and medical costs dropped immediately. Such a saving to industry could be readily calculated. It was a *direct* saving.

During this era also, accident prevention began to receive serious attention. Industry began to safeguard machines, exhaust and ventilate operations which were known to cause injuries to health, employ safety experts, and teach employees how to work safely. Although there is a great deal yet to be done in preventing accidents, industry, in general, has made tremendous strides in this direction, and deserves a lot of credit. Perhaps you will permit me to give a rather interesting example from my own company of results achieved by persistent safety efforts; the employees of one Remington Arms plant take much pride in the fact that the plant has not had a single lost-time accident since March, 1934—more than 10 and a half years ago! Other companies could add many striking illustrations of encouraging progress. It is safe to say that today the total amount of major industrial surgery necessary in the average industrial town of a population of 150,000, could easily be done by one surgeon.

During the same era, industry also found that pre-employment physical examinations to determine the physical ability of an employee to do the job for which he was being considered, were advantageous from a direct cost standpoint. This was done by many more companies than you perhaps realize.

The second era in industrial medicine began when the economists in industry found that their *indirect*, or hidden, costs could be reduced by employing a full- or part-time physician. They found that, whereas, they had 100 machines to accommodate 100 employees, they were only able to produce material from about 94 machines, for the reason that, on an average, six employees were away from their work continuously because of sickness or injury. On investigation they found that the total number of days lost for non-occupational injuries and illness exceeded the days lost for occupational injuries and illness by as much as 50 to 100 times. It was apparent to industry that employees who were properly placed and examined frequently would lose less time from work.

In addition, a plant physician could be of material value in creating healthful working conditions. The advantages of this service were immediately observed both by management and employees. The employee was healthier, happier and was able to earn more wages. Management had less employment turnover, increased quality and quantity in production, and improved employer-employee relations.

You are already familiar with the scope and objectives of this type of medical service. We can definitely say that present day industrial medicine is preventive medicine. The industrial physician is simply applying recognized public health measures, and is in reality the public health officer for industry.

This public health service, however, is for an age group which, heretofore, was sadly neglected. For example, today public health measures begin with the expectant mother, and continue after the birth of the child through pre-school, grade school, high school and college years. As private practitioners, you are all quite familiar with the recommendations made by school physicians and submitted to parents and guardians. You are also familiar with the tremendous improvement in the present day health of pupils and students. But I am sure you will agree that very few of your patients report to your office once or twice a year simply to get a physical check-up. It is precisely this important phase of public health which many industries are today promoting through their medical departments, with mutual benefit to employee, employer, and the family physician.

Frankly, I am at a loss to under-

**USEFUL**

in many ways.

**ALKALOL**

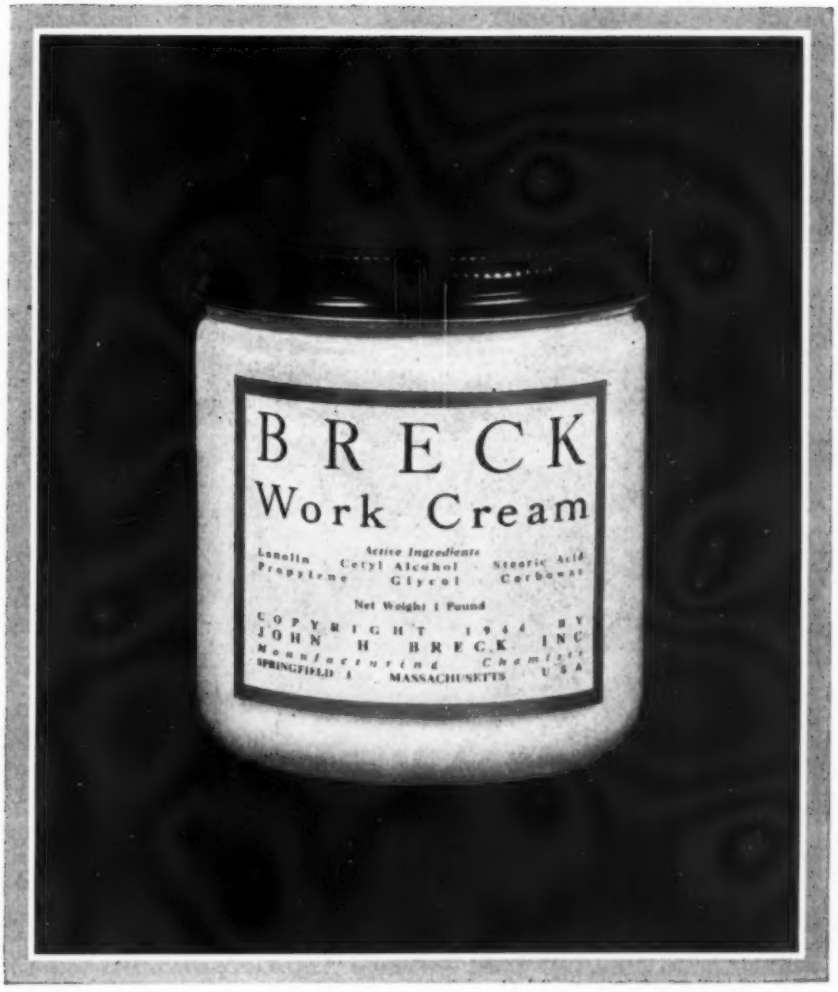
is primarily a treatment for mucous membranes of the eye, nose and throat.

But because of its unique balance of valuable salts and oils, it is effective also as a soothing, cooling wet dressing for many wounds, minor burns or skin irritations.

**ALKALOL** can be a real first aid in your plant.

THE ALKALOL COMPANY
TAUNTON MASS.

# B R E C K



## B R E C K  W O R K  C R E A M

Breck Work Cream is steadily making new friends with workers and management · Breck Work Cream is used by men and women as a hand cream after the day's work · The very highest standard of excellence is maintained in its manufacture · Breck Work Cream has been produced for men and women who want the best in a hand cream · If you are not familiar with this hand cream why not let us tell you more about it

JOHN H BRECK INC · MANUFACTURING CHEMISTS · SPRINGFIELD 1 MASSACHUSETTS
CANADIAN ADDRESS · 47 CLARENCE STREET · OTTAWA

stand how the dentists get their patients to report regularly once or twice a year for treatment or examination for such a very small portion of the total anatomy—unless it's for reasons of vanity. Or can it be the influence of radio commercials? Perhaps we should do more advertising regarding the value of periodic physical examinations. In any event, a great many industries are examining all of their employees periodically. During the physical examination the employee is advised of any physical deficiencies and is referred to his own private physician for treatment or advice. In some plants this examination includes: complete blood counts, Wassermann tests, urinalyses, chest x-rays and electrocardiograms.

This type of work has been done by the Remington Arms Company, in Bridgeport, Connecticut, for the past 11 years with remarkable success. At the beginning of the program the general practitioners or family physicians were a little skeptical about the plan. They soon learned, however, that we were performing a service which was not only valuable to the company but also to their patients and themselves. Within a short time many a physician began seeing some of his old patients long before they might have been expected to come to his office with subjective symptoms, as a result of the plant's periodic examinations. No one can dispute the value of this type of program as a public health measure and true preventive medicine.

There are, as you might expect, some misunderstandings on the part of general practitioners on occasions. Having done private practice, I have a full appreciation of some of these misunderstandings. Let me illustrate by example:

An employee presents himself to his foreman with a note from his private physician stating that his patient cannot work on a certain shift and recommending that he be taken off his present shift immediately. The foreman, naturally, refers the employee to the medical department where the case is reviewed. As industrial physicians we know that with the exception of a case of arrested pulmonary tuberculosis, arthritic conditions and perhaps a few others, it makes little difference which eight hours out of the 24 an employee works. It is true that certain shifts might be inconvenient and less desirable from the employee's standpoint. It is easy enough for him to go to this physician and say: "Doctor, the work at the plant is getting me down. I just can't work these shifts. Will you give me a note so I can get my job changed?" But in time of war, when production schedules set by the Armed Forces *must* be met, it is not possible to suit the convenience of everybody, despite our best efforts. If two or three shifts are necessary, isn't it reasonable and fair to ask all who can do so without real harm to share the inconveniences of night hours, as is done in our case by a system of rotating shifts?

I cite this example as one which you have all probably run across at one time or another; and doubtless you are familiar with other cases of a kindred nature. Obviously, if industry today were to carry out all the recommendations sent in by family physicians, it could hardly function. I should like to suggest, therefore, the desirability and importance of the closest cooperation between family physicians whose patients may bring these requests, and plant physicians, since this problem calls for thorough understanding on both sides and the best cooperative effort to work out a satisfactory solution in each case.

As many private physicians know from experience, the making of unwarranted requests by employees can reach proportions and extremes that prove embarrassing. In one community where the practice became vicious, the local industries approached the medical society for help and advice. The situation was quickly remedied when the society appointed a committee to review all medical certificates presented by employees from their physicians.

Today, we are embarking on a new era of expansion in industrial medicine.

The new laws which now regulate and control employment in industry and the increasing interest on the part of labor organizations are mainly responsible for this new era. Already, smaller industries which, heretofore, did not have any medical service to

"MOIST HEAT" IN RESPIRATORY CONDITIONS

• CHEST COLDS • BRONCHITIS
• PLEURISY • PNEUMONIA

THE moist heat of an ANTIPHLOGISTINE pack is of definite value in relieving many of the troublesome symptoms accompanying affections of the respiratory tract.

Cough—Muscular and Pleuritic Pain—Retrosternal tightness—Soreness of the Chest.

ANTIPHLOGISTINE is a ready to use Medicated Poultice—it maintains comforting moist heat for many hours.

*Formula: Chemically pure Glycerine 45.000%, Iodine 0.01%, Boric Acid 0.1%, Salicylic Acid 0.02%, Oil of Wintergreen 0.002%, Oil of Peppermint 0.002%, Oil of Eucalyptus 0.002%, Kaolin Dehydrated 54.864%.*

Antiphlogistine

**The Denver Chemical Mfg. Co., New York 13, N. Y.**

*Cross Bath Pump Room, Bath, England; Early Nineteenth Century*

## NOW AS THEN...
## A THERAPEUTIC TREAT

The cheerful, reassuring and relaxing atmosphere that is such a priceless part of Spa treatment cannot be bottled. But the important feature to which many a Spa owes its success is within reach of all your patients—sparkling, carbonated, saline-laxative water.

The same ingredients frequently found in Spa waters—sodium sulfate, sodium chloride and sodium bicarbonate—are scientifically combined with other salts in pleasant-tasting SAL HEPATICA to create gentle "Liquid Bulk" for effective cleansing of the intestinal tract.

*For a gentle, more efficient laxative, or thorough cathartic—direct your patients to dissolve* SAL HEPATICA *in a large glass (8 oz.) of water. Laxative Dose: 1 to 2 level tsps. Cathartic Dose: 4 level tsps.*

*A Product of Bristol-Myers Company, 19 XX West 50th Street, New York 20, N. Y.*

**TO HELP FLUSH THE INTESTINAL TRACT**

**Sal Hepatica SUPPLIES Liquid Bulk!**

FOR 50 YEARS

this respected trademark has symbolized Unexcelled Quality

Through the years, discriminating surgeons have justified their confidence in instruments bearing the Kny-Scheerer trademark. By long experience they have come to regard this hallmark to be as indicative of superior quality as "STERLING" on silver. This symbol proclaims the integrity of the manufacturer . . . it identifies instruments of correct technical design, micrometric accuracy and functional dependability.

Kny-Scheerer instruments are built up to a quality . . . not down to a price. Carefully selected metals and advanced production methods contribute to long periods of instrument life and satisfactory performance . . . equal in every respect to the finest instruments formerly imported. Today—as in years past—surgeons demand the unexcelled qualities K-S instruments afford.

*Available through responsible dealers everywhere*

KNY-SCHEERER CORPORATION

21-09 Borden Ave. Long Island City 1, N. Y.

speak of, are now appealing for help in the development of a medical program. Industrial physicians have attempted for many years to interest more physicians in the field of industrial medicine and various methods have been tried with very little success. Again, the cart is in front of the horse; industry has taken the initiative.

Many of the labor union contracts throughout the country now contain provisions for company dispensary facilities and medical services. Whereas, several years ago the unions were skeptical about such services they have now come to realize that the employer is not the only one who benefits. In addition, the manufacturers' associations throughout the country are realizing that a definite rehabilitation program is vitally important to industry's future welfare, and have indicated that the services of at least a part-time physician will be necessary for a company to carry through such a program effectively. As physicians we know that an employment manager could hardly be expected to determine what types of employment would effect psychoneurosis or shistosomiasis. I will not attempt to explain all of the provisions of the G. I. Bill of Rights or the Selective Training and Service Act. However, I would like to familiarize you with the purposes of the law in order that you will have some idea as to the complexity of the re-employment and rehabilitation problems.

Probably the greatest number of veterans seeking re-employment and needing rehabilitation will be those with minor injuries or loss of skill who will require only proper job placement plus reasonable on-the-job instruction, plus adequate follow-up to insure proper adjustment.

Other types of casualties will be those whom the employer cannot deal with and for which society at large, through the government, will have to accept responsibility. Another type will be handicapped individuals who will need a great amount of specific training to make them employable but who will eventually become gainfully occupied. These men probably will receive training through public facilities and the employer should constantly keep in touch with them, lend them encouragement, and try to offer employment when trained. Generally the rehabilitation program should follow the same pattern as in the war period. Close contact should be maintained with the Rehabilitation Section of the State Departments of Education, the Veterans' Administration, the Veterans' Employment Service of the USES, and the Personnel Division of Selective Service through the Re-employment Committeeman.

Mainly, the program should follow these lines:

1. To place the individual on a job for which he is best suited and on which he can perform in a satisfactory manner after a reasonable period of breaking in;

2. To remove from the program any taint of sympathy or charity for the individual. He must be given to understand that he is making a definite contribution to the community;

3. To give responsibility for placement to a competent person who is thoroughly familiar with the job within the plant. In a large plant the person in charge of placement should be a thorough-going "job evaluator," with a sound knowledge of what each job requires of the operator;

4. To check and guide placement and follow it up with adequate medical supervision.

Obviously the services of a part-time physician can be utilized by the small company which is making out its rehabilitation program. The physician can become familiar with working conditions and occupational hazards generally. He can also deal with the individual rehabilitation case in an intelligent manner if he is well acquainted with the plant. This would require counselling with the personnel department in proper placement of the disabled veteran, follow-up and advice, if necessary.

In large plants these functions will be the responsibility of the plant physician.

I think it will be obvious to you, in view of the situation confronting us, that many more physicians will be required to assist industry with this tremendous task. As I see the problem it will be necessary for American industry to depend mainly on the

# For the Worker, too . . .

Not merely for the sake of better work output and greater work efficiency, but for the sake of the worker himself have industrial physicians found it advantageous to advise the eating of a better, nutritionally more adequate breakfast.

When the interval between adequate food intake extends from the evening meal until noon of the next day, it is frequently if not usually reflected in the general state, in lessened efficacy and stamina, in lessened physical, psychic, and emotional competency.

A good start toward breaking breakfast-skimping habits is to advise a basic breakfast pattern of fruit, cereal (ready-to-eat or to-be-cooked) with milk and sugar, bread and butter, and a beverage. Variety in taste and form of the main dish makes such a breakfast acceptable and easy to eat. The speed with which it can be prepared, and the little time required for its eating, will prove a big point with many workers. Effect on work performance and sense of well-being needs little discussion.

What this breakfast presents nutritionally, and the percentage of each nutrient supplied by its main dish—1 oz. of cereal (whole-grain, enriched, or restored to whole-grain values of thiamine, niacin, and iron), 4 oz. of milk, and 1 teaspoonful of sugar—is shown in the appended table.

**BASIC BREAKFAST:**
**Orange juice, 3½ oz.; Cereal, 1 oz., with milk, 4 oz., and sugar, 1 tsp.; Bread (enriched, white), 2 slices, with butter, 10 Gm.; Coffee with cream (20%), 2 tablespoons (30 Gm.) and Sugar, 1 tsp.**

| | TOTALS | AMOUNTS supplied by cereal, milk, and sugar dish | PERCENT represented by cereal, milk, and sugar dish |
|---|---|---|---|
| Calories | 567 | 201 | 35.4% |
| Protein | 13.5 Gm. | 7 Gm. | 51.9% |
| Calcium | 252 mg. | 158 mg. | 62.7% |
| Iron | 2.73 mg. | 1.73 mg. | 63.4% |
| Vitamin A | 1042 I.U. | 193 I.U. | 18.5% |
| Thiamine | 0.44 mg. | 0.19 mg. | 43.2% |
| Riboflavin | 0.47 mg. | 0.27 mg. | 57.4% |
| Niacin | 2.58 mg. | 1.82 mg. | 70.5% |

*The presence of this seal indicates that all nutritional statements in this advertisement have been found acceptable by the Council on Foods and Nutrition of the American Medical Association.*

CEREAL INSTITUTE, INC.
135 SOUTH LA SALLE STREET • CHICAGO 3

# Traffic Test

**shows how wax wears**

Wear is the most important property to seek in a floor wax. The Dolge traffic test shows you how Dolcowax and other brands compare. We have just prepared a new folder which furnishes the busy buyer with a handy guide—explains tersely how to judge a wax—also explains the significance of the many other factors that distinguish one wax from another.

Write for folder H1 on *How to Judge a Wax*

**The C. B. DOLGE Co.**
Westport, Connecticut

DOLCOWAX

DEATH TO DISEASE
DOLGE

More, Richer Red BLOOD Cells
**THI-FER-HEPTUM**
(Capsules)

**Thi-Fer-Heptum provides liberal potencies of Iron Sulfate, hematinic Liver Concentrate and absorption-aiding B Complex Vitamins $B_1$, $B_2$ and Nicotinamide . . . for economical and more rapid blood building in Secondary and Nutritional**

**ANEMIAS**

CAPSULES, bottles of 50 and 100. Thi-Fer-Heptum AMPOULES (intramuscular), boxes of 12, 25, and 100.

**For Literature Write Dept. I.M.**

CAVENDISH PHARMACEUTICAL CORP.
25 West Broadway • New York 7, N. Y.


general practitioner to get this enormously important job done. Fortunately, many general practitioners already have close contacts with industry and so we are not starting from scratch. But we have a long way to go.

In order to meet this situation the following plan is submitted for consideration:

1. Contact the local Manufacturers' Association and through the Industrial Health Committee determine the following:

(a) The number of industrial concerns in your vicinity and the approximate number of employees in each;

(b) If possible, what their postwar outlook is, in so far as employment is concerned;

(c) The types and extent of medical services in each.

2. Take a census through your medical society to determine the names of all physicians who would be willing to assist industry.

3. Continue to develop and expand both under-graduate and post-graduate teaching of industrial medicine and hygiene.

Finally, may I suggest that this whole problem is now rapidly building up and will be upon us in all its magnitude before long, if all goes as well overseas as we hope and believe it will. The time to plan and prepare, therefore, is now.

## Industrial Mental Health

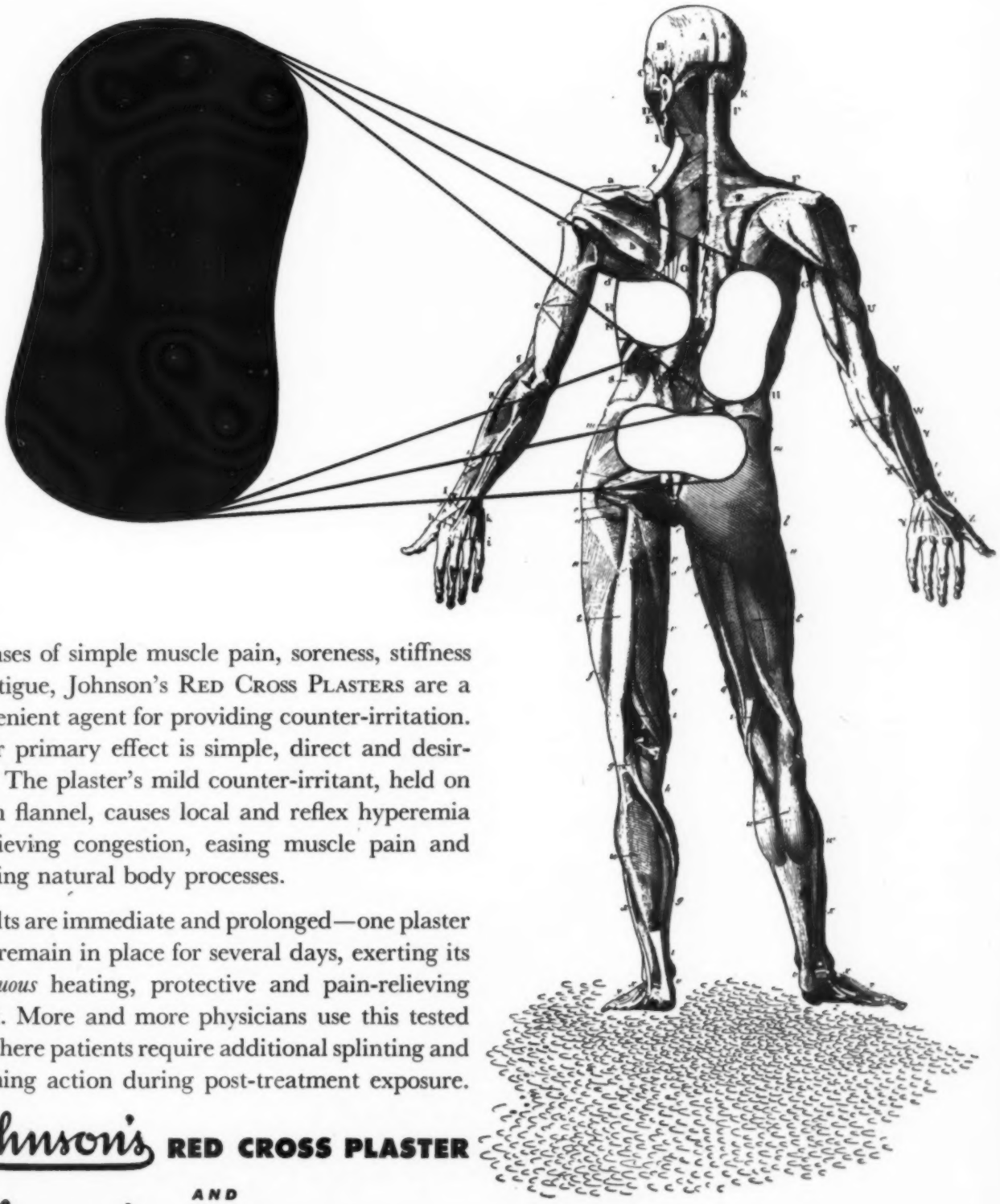
*—From a Round Table Discussion at the 100th Annual Meeting of the American Psychiatric Association, Philadelphia, May 16, 1944, as published in "Mental Hygiene," January, 1945—*

### Labor's Place

CLAYTON W. FOUNTAIN, Assistant to the Vice-President, UAW-CIO, "Labor's Place in an Industrial Mental-Health Program," in *Mental Hygiene*, January, 1945 (29:1, 95-101). Extract: "Abraham Lincoln said that God must love the common people—He made so many of them. Applying this same slant of thought to the topic of this meeting, I suggest that labor has a very large place in any program of industrial mental health, because the workers constitute the greatest bulk of the personnel employed in industry. As I see it, labor has two places in such a program. First, there is the role of the individual worker whose mind may be upset by some problem, industrial or personal, to the point of reducing his or her effectiveness on the job. This means that the individual worker, as a potential beneficiary of a mental-health program, has a large stake in its success. Second, there is the role of the workers as a group, organized in their unions, whose acceptance or rejection of such a program will, to a large degree, determine its success or failure. Within the limits of this dual role of labor in a mental-health program for industry, I think we can define the perspectives for labor participation, and weigh the possibilities of success. First of all, I think that organized labor, as a whole, generally realizes and appreciates the need for a program that aims at making workers happier and more contented on their jobs. This goal has, in a sense, always been the basic objective of the organized labor movement. It is true of course that the emphasis of our organizational activity has been focused on improvement of the worker's economic lot, this being the shortest route to a higher level of happiness and contentment for our people. But the fight for our right to work collectively for the material advancement of the worker has been so bitter and so prolonged that we have had little time to devote to improvement of our mental, medical, and cultural environment. It is tragic that this should be so. In a democratic society such as ours, motivated so powerfully by industrial dynamics, and with the lives of so many millions linked directly to industrial activity, our major cultural endeavor ought to be directed toward safeguarding the personality and the human dignity of those as-

JOHNSON & JOHNSON SUGGESTS:

## COUNTER-IRRITATION AS A METHOD OF TREATMENT



In cases of simple muscle pain, soreness, stiffness or fatigue, Johnson's RED CROSS PLASTERS are a convenient agent for providing counter-irritation. Their primary effect is simple, direct and desirable. The plaster's mild counter-irritant, held on warm flannel, causes local and reflex hyperemia —relieving congestion, easing muscle pain and assisting natural body processes.

Results are immediate and prolonged—one plaster may remain in place for several days, exerting its *continuous* heating, protective and pain-relieving effect. More and more physicians use this tested aid where patients require additional splinting and warming action during post-treatment exposure.

Johnson's **RED CROSS PLASTER**

AND

Johnson's **BACK PLASTER**

*60 day trial develops*

# NO NEW DERMATITIS CASES

A manufacturing plant employing 350 persons exposed to a serious dermatitis threat, reduced the incidence of cases from 10% to nothing in a period of two months. Said the report: *No new cases reported after 60 days of Kolar protection.*

You may have a very real problem of dermatitis control but it can be licked with a minimum of expense and supervision on your part. The two rules to follow are: (1) prevent known irritants from entering the pores of the skin; and (2) prevent defatting action of harsh cleansers that contribute to dry skins. In the case cited above, control was gained over dermatitis by:

**1** Apply ELEVEN THIRTY-TWO Protective Cream before starting work to hands and all exposed parts of the body. This cream resists water-soluble irritants, yet may be readily removed along with impurities by washing. There is no "secret" formula involved. It is a protective compound of *lanolin*—in sufficient quantity to do a thorough job.

**2** Cleansing is done with FOAMING OIL SKIN CLEANSER, a *sulphonated vegetable oil* mixed with a wetting agent. It is an *efficient cleansing compound* that helps preserve natural skin oils—as it provides additional beneficial oils for the skin to help build up resistance to drying or chapping both on and off the job.

**A GUARANTEE**—based on your experience. Best proof of the value of these dermatitis preventives is your own experience. You can get this experience at no cost by using the Kolar Laboratories' *trial offer.* We will ship prepaid six one-pound jars of ELEVEN THIRTY-TWO Protective Cream, and (one gallon) of Foaming Oil Cleanser invoicing in the regular manner, but with the distinct understanding that this invoice is not to be paid unless the preparations measure up to your expectations in every way.

KOLAR LABORATORIES, Inc., Seeley Avenue & Madison St., Chicago 12, Illinois.
Distributors in all principal cities.

**KOLAR** *Products*
*Lick Dermatitis Hazards*
**BY PROTECTING AND CLEANSING THE SKIN**

829A


signed to the monotonous task of tending machines. That is precisely what the enlightened labor movement of today seeks to accomplish: to establish the dignity of the worker as a human being, to develop his or her personality, to safeguard his or her individuality, and to provide compensating cultural opportunities sufficient to offset the monotony of long hours of pushing buttons and pulling levers. And I think that the foregoing objective could very well be set forth as the goal of a program of mental health in industry. To achieve this goal, or even to work toward its achievement, a program of mental health in industry must, in my opinion, adhere rigidly to three very basic principles: First, the right of the labor unions to participate fully in the formulation and implementation of the program should be firmly and clearly established. This is vital for a number of reasons. We of labor want to be assured, for one thing, that such a program will not be misused by individual employers, or groups of employers, as a weapon of subtle attack on labor organizations. The best way to provide this assurance is to make a place for labor representatives on the councils charged with the responsibility of planning the program. For another thing, the program should prudently avoid invading the jurisdiction of the grievance procedure in plants operating under collective-bargaining agreements. This is not to suggest that all employers would subvert the program and use it for purposes of anti-union activity. But some might try so to subvert it and to use it for selfish purposes. We must provide adequate safeguards against such potential abuses. In the field of government, we have laws to protect each individual against the whims and weaknesses of other individuals situated in positions of authority; so, in our mental-health program for industry, we must insure against misuse of the program by irresponsible individuals, either of management or labor. For this reason, it is essential that, in implementing the program, those problems relating directly to conditions of employment covered by collective-bargaining agreements should be handled through the routine grievance procedure. There will, of course, be instances in which a collective-bargaining problem will result in a mental-health problem affecting an individual worker. In such a case, the union steward or committeeman in that particular shop locality should be responsible for helping the troubled worker. This is another good reason why the union should be so integrated into the program as to enable its leaders to recognize problems of mental health and know what to do about them. The union to which I belong, the UAW-CIO, is at present training union people to serve as counselers in the plants. This is a sign of progress which invites the notice of other labor organizations. To sum up this point, I would say that the best way to pre-

# Easing U. R. I.

*(Upper Respiratory Infections)*

**The many aches and pains which accompany coryza, sinusitis and other respiratory infections demand symptomatic relief. When physicians prescribe 'Tabloid' 'Empirin' Compound, the synergistic action of the acetylsalicylic acid with the acetophenetidin allays head pains and general malaise while lowering fever. The small amount of caffeine in 'Tabloid' 'Empirin' Compound also combats the general depression frequent in colds.**

Each product contains acetophenetidin gr. 2½ (0.162 gm.), caffeine gr. ½ (0.032 gm.), acetylsalicylic acid gr. 3½ (0.227 gm.). Also 'Tabloid' 'Empirin' Compound with Codeine Phosphate, gr. ⅛, gr. ¼, and gr. ½.

'Tabloid' and 'Empirin' are Registered Trademarks

BURROUGHS WELLCOME & CO. (U. S. A.) INC.
9-11 East 41st Street, New York 17, New York

'TABLOID' *Empirin* COMPOUND

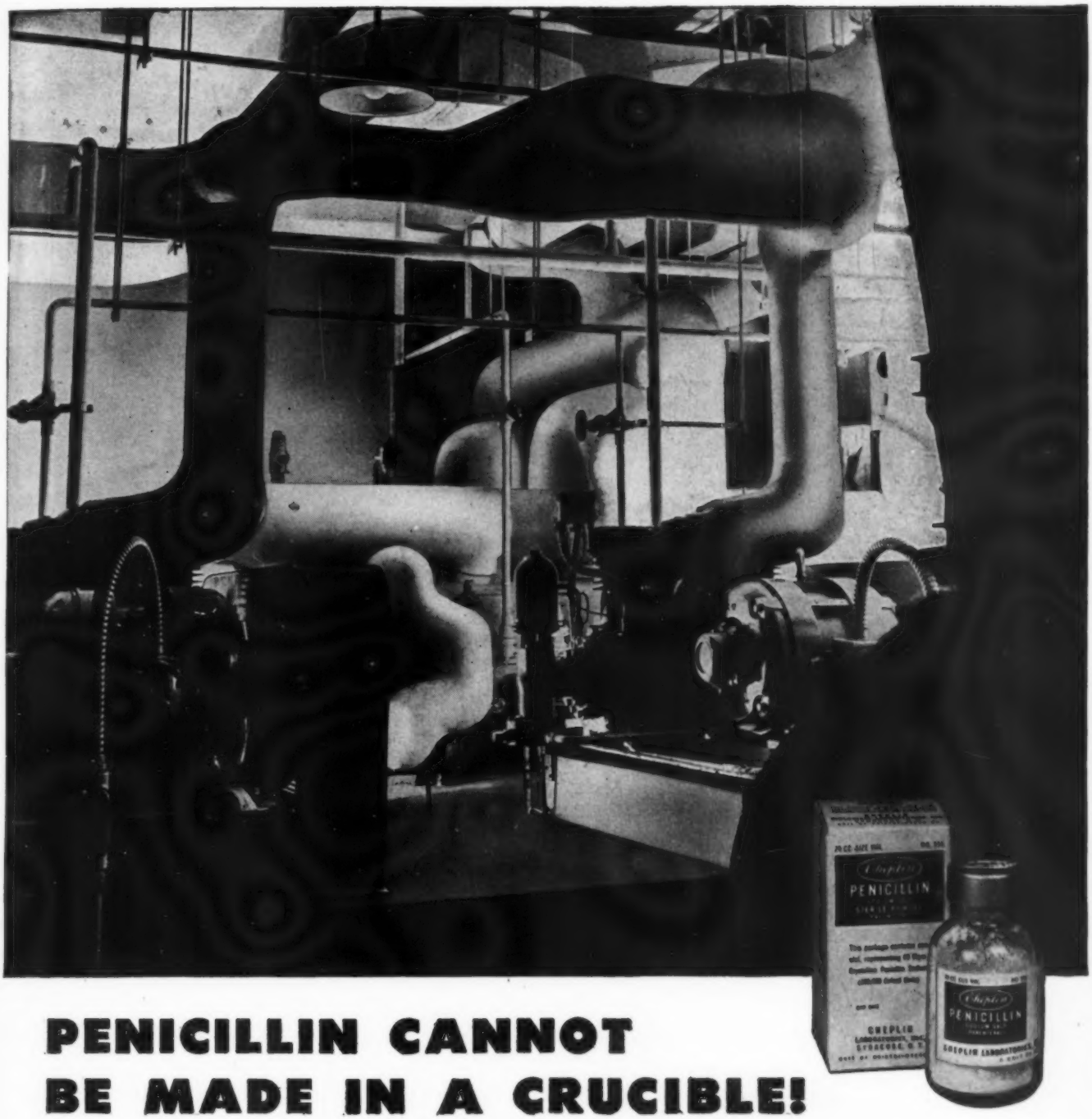
Bottles of 100 and 500

vent conflict between the mental-health program and the union grievance procedure is for the union and the employer to work the program out together and agree on their respective areas of responsibility. The next principle I wish to propose for the program of industrial mental health is a negative one. It is that the program should not be paternalistic. This does not mean that we of labor want management to be totally cold and indifferent to the welfare of the individual worker. We welcome the active concern of employers with the welfare of single workers or groups of workers. But there is a difference in employer attitudes. Some employers regard the workers as mental infants, to be endlessly coddled because they are incapable of helping themselves. Other employers look upon the workers as adult human beings, capable of asserting individuality and developing personality. The former are themselves in need of mental-health treatment; the latter deserve encouragement and applause. Paternalism is degrading to the worker. It assumes that all workers are victims of arrested mental development; that they can never develop sufficient personality and individuality to do things for themselves; and that, therefore, the employer, acting the role of a kind of benevolent industrial lord, must forever perform the fatherly duty of wiping the worker's nose. We of labor object to this philosophy. Even if an employer showers his workers with paternalistic bounties, we still don't like it. We like the bounties, but we don't like the spirit in which they are given under paternalism. I recall at this point the bonuses paid to me when I worked for Chevrolet in the period immediately preceding the organization of the UAW-CIO. These bonuses did not prevent me from joining the union. I wanted more than charity, more than money. I wanted to be a human factor in the productive mechanism, to get joy from my work, and to assert myself in plant affairs. Paternalism in the form of bonuses could not fulfill my desires; the union could and did. A mental-health program for industry, if directed solely by management, could easily degenerate into a pattern of paternalism. As such, it would not safeguard individuality or develop personality. It would simply cultivate a dependency of the worker on his employer and tend to intensify the mental-health problems in the plants. The way to avoid paternalism in such a program, here again, is to provide for union responsibility and participation in the carrying out of the program. Through their union organization, the workers should be permitted to apply what talents they possess to the solution of mental-health problems at the shop level. Thus paternalism will be avoided, and the program will induce the workers to cooperate in making it work. Finally, I submit as my third principle the assertion that development of a mental-health program in industry is not merely an act inspired by the compulsions of our war-time emergency. Some may look at it that way. I know that we of labor, having to deal with the Labor Board, the War Production Board, the Manpower Commission, the Office of Price Administration, and other war-time government agencies, recognize the inducements to insanity that characterize labor relations today, under the pressures of war. The employers are no doubt equally strained in a mental sense by the complications involved in managing war-production plants. This is one thing we have in common, about which there is no dispute. In this respect, at least, the war has sharpened our need for a real program of mental health in industry. But this is more than a war-time problem. It is a problem that we of America inherited with the industrial revolution, a problem that we have not yet begun to solve. Assuming that, as every one hopes, we move forward to an era of full employment and total production for peace in the days to come, we shall still not have solved the basic problem affecting our industrial society. That problem is the task of so ordering our industrial structure as to elevate the average industrial worker—the machine-tender, if you please—from the status of a cog in the machine to the status of a free man who feels that he is master of the machine and capable of directing his own destiny. He is certainly not that today. . . . I have personally spent 10 years as a production worker in the automotive industry—10 years of operating welding machines, lathes, grinders, punch presses, and milling machines, interspersed with monotonous hours on the assembly lines. . . . I have seen workers smash their machines, sheerly out of frustration, desperation, and the mental strain of monotonous work. I have seen fights break out in the plant, because of tension and strain arising out of job dissatisfaction and monotony. I have gone with my fellow workers to the beer joints at the end of the shift to ease with alcohol the strain of fast, monotonous labor. If time permitted, I could cite you some interesting cases of mental disturbances arising purely out of the inhumanity and impersonality of modern industrial operations. The goal of a realistic industrial mental-health program ought to be correction of these conditions. There is a cultural challenge here in the impersonality of our factory system; it is a challenge to labor, a challenge to management, a challenge to government, a challenge to the medical profession. I believe that the impersonality of our industrial structure is a potent factor in the convulsions of war and dictatorship that today beat at the bastions of our civilization. The problem of preserving peace—when we have won it—and of guiding mankind toward higher levels of civilization is, in my opinion, largely contingent upon our capacity to make human again the workers who tend our machines. . . ."

## Mental-Health Needs

GORDON A. EADIE, M.D., Eastern Aircraft Division, General Motors Corporation, Linden, New Jersey, "The Over-all Mental-Health Needs of the Industrial Plant, with Special Reference to War Veterans," in *Mental Hygiene*, January, 1945 (29:1, 101-106). Text: "This is for me a very special occasion. Just about a year ago, in Detroit, I attended a similar meeting on the same subject at the 99th annual meeting of the American Psychiatric Association. The discussion immediately captured my interest and afterward there came a strong conviction that this would be my field of work. Until then I had looked forward to going into private or group practice. Not long afterward the opportunity came to become plant physician at Linden and to work with a good many veterans of the present war. We have, in fact, over 500 veterans now, and their presence has accentuated the need for a sound over-all mental-health program. About 20% of these men were discharged for neuropsychiatric reasons and most of the remaining 80% have more or less difficulty in adjusting to civilian life. The following elements are important in their adjustment in industry—(1) a job; (2) opportunities for training; (3) a means of integrating their military experience into the whole of their lives; and (4) a high level of mental health in the plant. The first two points I have discussed in a previous paper.[1] Here I want to deal especially with the last two. *A Means of Integrating the Veterans' Military Experience Into the Whole of Their Lives*—We realize the necessity of integrating the veterans' military experience into the whole of their lives if they are to make a satisfactory adjustment. They have gone through the disturbing experiences of entering military life from civilian life, and now they are suddenly called upon to reverse the process. It is not at all surprising that many are unstable and difficult at this time. In service they were trained to have as their chief objectives the destroying of the enemy and the preservation of their own lives. Thus their training was largely a reversion to more primitive modes of behavior, with emphasis upon intense sensory and motor functioning. No wonder, then, that they find it hard to 'settle down,' and that they have strong appetites and desires. With all the mental and emotional conflicts and tensions in these boys, the important thing is that they shall not stop fighting, but shall continue to use the courage, discipline and other qualities that they gained in service. This will not only effect an adequate integration, but will also release their energies creatively instead of inhibiting them. This was impressed upon me recently in the case of a boy who had sustained a fairly severe head injury while serving in

1. Who Can Work—Neuropsychiatric Aspects. INDUSTRIAL MEDICINE, 13:6, 533-535, July, 1944.




# PENICILLIN CANNOT BE MADE IN A CRUCIBLE!

Bring back Paracelsus and his crucibles today... show him the clinical picture of Penicillin... take him on a trip through a great Penicillin plant like that of Cheplin Laboratories. What would he think? Your guess is as good as ours!

Just as strides in clinical medicine have been unmeasurable since Paracelsus' time, so too have been the strides in mass-manufacture and plant-investment. In the Cheplin plant at Syracuse, for instance, there are alone thirty miles of pipe needed to make this new "wonder-drug."

Who can state Medicine and the Pharmaceutical Manufacturer aren't working together for a better post-war world? And Cheplin is doing its bit!

**CHEPLIN**
**LABORATORIES INC.**
(UNIT OF BRISTOL-MYERS COMPANY)

**SYRACUSE • NEW YORK**

the navy in the South Pacific. Like so many boys with head injuries, he was rather unstable, tense, and jittery for several months. He returned to the plant, however, and, thanks to a very game spirit, was able to work for some time. He felt very keenly the conflicts, bitterness, and tensions in the plant and tried to produce a spirit of cooperation to reduce them. However, in the end they were too much for him, and he slumped into a depression, losing over a month from work. We finally got him to come to the office and he is making a gradual comeback. He has faith and a fighting spirit and that is the thing that we feel will pull him through. This case made me realize keenly how important it is to help the veteran see clearly that for him the war is not over when he returns to civilian life. It is our job to arm him to win out in the war on the home front. He needs to realize, too, that fighting on the home front is more than doing a good job at his bench, buying war bonds, and cooperating in the rationing program, important as these are. We are trying to show him not only what we are fighting against, but what we are fighting for. So many of these boys have only a very hazy idea of the real issues of the war. About all they see is 'going back to the good old days.' This is a dangerous state. If they don't stand for something, they will fall for anything. They need to realize that we are fighting two wars—the war of arms and the war of ideas—that other war of which the war of arms is one phase. They can fight now as hard in this war as they ever did in the war of arms—as they work to build a new nation, 'strong, clean, united,' in the words of Admiral Richard E. Byrd. As General Pershing says, 'This is a war of ideas. It is a battle of faiths. It can be won and peace made lasting only if what we believe in is strong enough to win.' The veterans can go right on using every bit of their energy, endurance, discipline, courage, and loyalty in this war. On the other hand, there is real danger of their losing these qualities under the corrosion of slipping moral standards, apathy, and the 'gimme' spirit in the civilian population. Many of the veterans have told me of their discouragement and disillusionment on coming home. They wonder whether their sacrifice was worth while after all. 'These civilians don't know what the war's all about.' *A High Level of Mental Health in the Plant*—In order to prevent the veterans from becoming disillusioned, we will need a sound over-all mental-health program—a program that is more than helping individual cases, important as that is. The object of such a program is to develop in the life of the plant the spirit of teamwork and of caring for the other fellow. In the atmosphere of such a spirit, the veteran will find it a lot easier to readjust and to achieve personality integration. Without such a spirit, we will be fighting a rear-guard action—with the risk that our efforts will be nullified by the negative influences in the organization. Recently we had a very interesting experience. A tall, thin, high-strung young fellow named Jim came to the dispensary complaining of anorexia, loss of weight, and insomnia. On inquiry, I found that since starting to work at the plant over a year ago, he had had frequent disputes with his foreman. He had called his shop committeeman in on an average of once a week. His foreman, a pleasant, stable chap, said that he had never been able to figure Jim out. After we had talked for a while, he began to see why Jim reacted as he did. I challenged him to build a spirit of cooperation with Jim. The next week Jim came to the dispensary, smiling broadly. He had gained two pounds. 'You know what happened?' he said. 'The foreman apologized to me.' From then on teamwork grew—and the man's health with it. 'Honest apology makes honest peace.' Another point in developing the atmosphere of teamwork is that of deciding issues on the basis of 'What's right' rather than of 'Who's right.' This principle was applied by the vice-president of a certain firm in Canada. He found that an employee of over 20 years' standing had become a trouble maker. The common remedy was proposed: 'Fire him,' said the assistant manager. The vice-president, however, tried to find out 'what was right.' He learned that the man concerned had a just claim for compensation for an injury received long before, but that the claim had not been properly dealt with. He wrote a letter to the man expressing the regrets of the company, had a check for the full amount made out, took both letter and check to the spot where the man was working, and apologized in person for the affair. This was something new in human relations as far as that company was concerned. The attitude of the men and the atmosphere of the place improved, with sullenness giving way to cooperation. The man who had been a bottleneck became an asset to the company. In order to build the spirit of teamwork, we need to develop leaders who are willing to 'stick their necks out' for the things that they believe in. We need leaders who put national need ahead of self-interest and think for the whole organization—and aggressively develop the same qualities in others. Such a leader was S., a shipfitter in a certain West Coast shipyard. About a year ago, the morale of the yard dropped to an all-time low, when the length of the work day was cut to eight hours, thus eliminating the heavy overtime pay the men had been getting. There was considerable grumbling and there were threats to quit. S. got some of his friends together and put it up to them to back him in fighting for a better spirit in the yard. Not long after that an emergency job had to be done out on the deck of a ship. It was raining hard and most of the shipfitters were all for working indoors, but S. and his friends said, 'Let's go, boys. We've got a war to win!' and went to work on the deck. Shortly afterward the entire gang was hard at work—in the rain. The new spirit spread to other parts of the yard. One night the painters 'did the impossible' and doubled production on a rush order. Another night S. and his friends persuaded a crew of eight to stay on with them to complete certain work and ready a ship for her trial run. As a further result, a number of the men returned to the company money that had been overpaid them on their checks. One of the men wrote: 'The sum involved was of little importance, but the honesty of the men is important if we are to have teamwork on the job and teamwork in industry.' S. and his friends illustrate what a determined minority, even though small, can do to affect the spirit and morale in a plant, removing friction and tension and building teamwork and an atmosphere in which people give their best. SUMMARY: (1) We feel that the returning veteran in his readjustment to industry needs: (a) A suitable job. (b) Opportunities for training and advancement. (c) A means of integrating his military experiences into the whole of his life. (d) A high level of mental health throughout the plant. (2) Successful integration of the veteran's personality requires the moral force of a dedication to national service, so that he does not stop fighting, but continues using the courage, discipline and other qualities he gained while in uniform. (3) An adequate mental-health program for the plant is concerned not only with the needs of the individual, but also with the "human environment"—the spirit of the people, from manager to janitor. (4) Creating a spirit of teamwork and understanding requires unselfish and aggressive leadership which is concerned with the needs of the plant as a whole, against the background of the nation. Building this type of leadership is essential to victory in the war of ideas."

## Foreman Contacts

L. E. HIMLER, M.D., Consulting Psychiatrist, Detroit Transmission Division, General Motors Corporation, Detroit, "Psychotherapeutic Aspects of Foreman Contacts," in *Mental Hygiene*, January, 1945 (29:1, 106-110). Text: "Foremen as a group are conscious of their position as first-line representatives of management, and are eager to learn and to improve their skills in dealing with the men and women with whom they are in daily contact. Job-relations training courses and the mass of pamphlet material on human relations, with which they are constantly beseiged, tend to keep them aware of the necessity for social as well as mechanical skills on the job. In terms of the human elements, the 'in-between' position of the foreman is delimited by individual problems and grievances, on the one hand, and the relentless demands of the production schedule for more effective group action on the other.

# What you do with your money can wreck you *(and your Uncle Sam)*

**BUY, BUY, BUY!** Foolish people are doing it, *over*doing it. But sensible folks know that with every needless purchase—or every time you patronize a black market or buy above ceiling—you do your bit to force prices up all along the line. That's the way inflation gets a boost.

**IT CAN HAPPEN HERE**—again! Today, with fewer goods in the stores while incomes are high, the danger of inflation is greater than ever. Inflation is always followed by depression. What can you do to head off another depression? Buy nothing you do not really—*really*—have to have . . . today.

**SAVE, SAVE, SAVE!** That's the way to make America good for the boys to come home to. Pay up debts, put money in life insurance, savings bank, War Bonds. Every cent you save now helps to keep prices down—and when the war is won you'll have use for that nest egg you've laid away.

**A HOME OF YOUR OWN,** a better farm, a real vacation, something to retire on—these are things worth saving for. Store up your money now while prices are high. There's a time to splurge and a time to save: today, while money's coming in, is a good time—the *right* and patriotic time—to SAVE!

## 4 THINGS TO DO

**to keep prices down and help avoid another depression**

1. Buy only what you really need.
2. When you buy, pay no more than ceiling prices. Pay your ration points in full.
3. Keep your *own* prices down. Don't take advantage of war conditions to ask more for your labor, your services, or the goods you sell.
4. *Save.* Buy and hold all the War Bonds you can—to help pay for the war, protect *your own* future! Keep up your insurance.

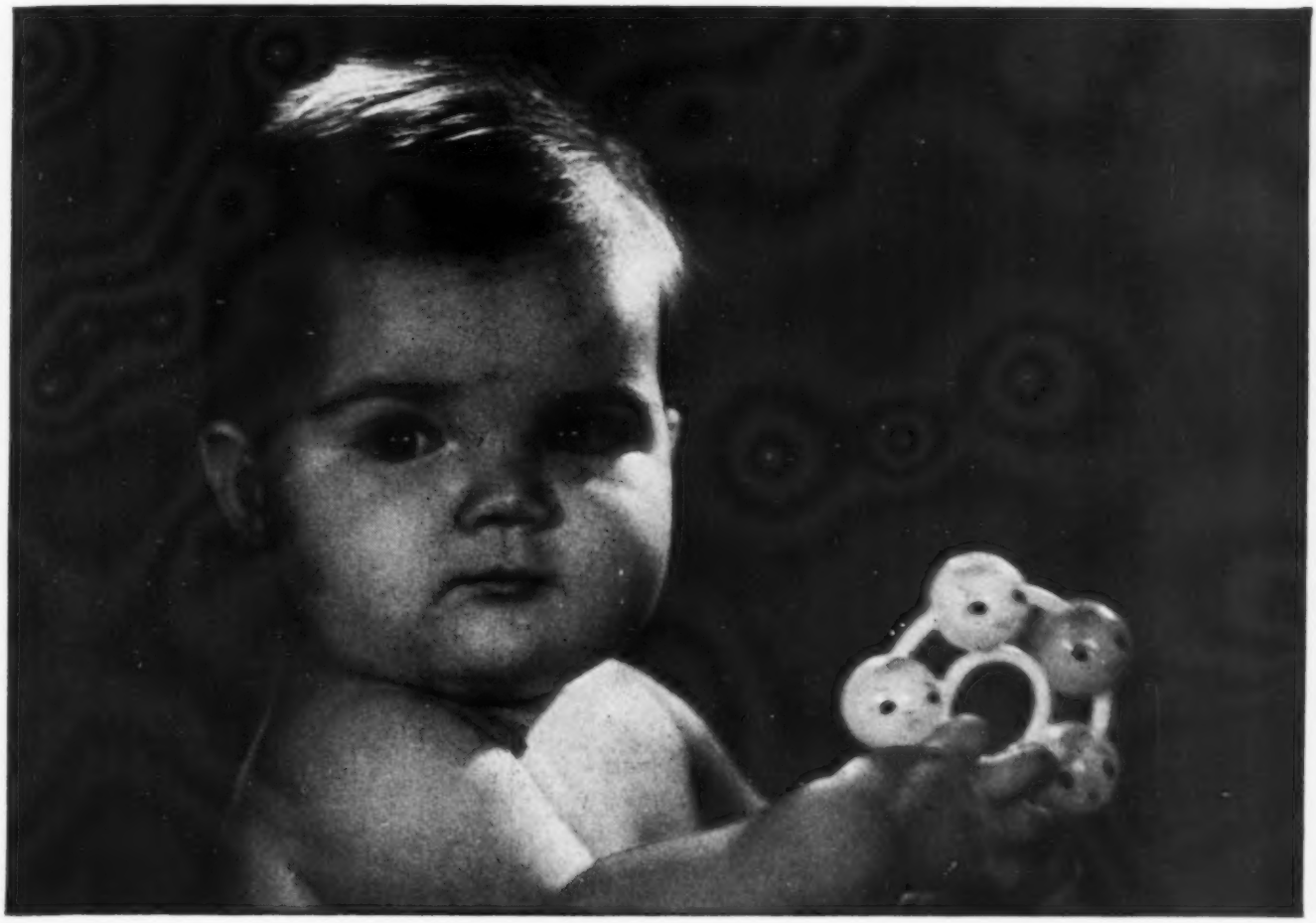
HELP US KEEP PRICES DOWN

A United States War message prepared by the War Advertising Council; approved by the Office of War Information; and contributed by this magazine in cooperation with the Magazine Publishers of America

Wartime experiences with many substandard workers, and now the anticipation of new problems in connection with the rehabilitation of returning servicemen, have both served to focus attention on the foreman's key position on the industrial human front. In this setting it must not be forgotten that the foreman himself is also a human being—that he, too, has personal problems, and is often greatly concerned over his successful adjustment and future security. There is little wonder, therefore, that foremen seek constantly to develop more effective methods of working with people, and will grasp at almost any suggestion, regardless of the source, that holds out hope of giving practical help. The degree of this interest was well shown by a recent questionnaire circulated among 350 foremen in a large Detroit war plant. Inquiry was made concerning eight proposed units for further instruction in the next supervisory training program. At the top of the list, 57% of the foremen desired more instruction in 'handling people,' and, in third place, 41% indicated their continuing interest in the subject of 'personal relations.' Foremen also made clear their desire to have this information presented in every-day language, given from a practical, common-sense point of view, tied in with their current problems, and taught by an able instructor in an interesting manner. All this serves to emphasize that the preparation and presentation of effective supervisory training programs along sound mental-health lines, particularly at this time, is a real challenge to the best efforts of industrial personnel workers, psychologists, and psychiatrists. The principles and techniques of mental hygiene can be brought to foremen through two main channels—group-training lectures and conferences, and direct individual interviews and consultations about selected problems of adjustment. These two methods must be considered as continuous and interrelated in any active, up-to-date educational program. Experiences gained from study and analysis of specific individual and departmental problems must constantly be woven into the content of training programs, and these should be highlighted by case presentations. 'Canned' talks, of a formal or theoretical nature, on the general subject of industrial human relations may whet the appetite, but they often fall short of meeting the full needs of foremen. These needs include pointed discussions on workable techniques as they can be applied to the daily problems of each foreman in relation to departmental efficiency, operating control, and meeting schedules. It should be remembered in this connection that the interpersonal relations of foremen involve not only the two well-known levels of worker below and executive above, but also cooperative contacts with men on their own level, in their own and other departments, and on different shifts. An impasse on this horizontal plane can result in serious 'production log-jams,' which are as serious to plant operation and morale as friction and constant misunderstandings in the vertical direction. The foreman's part in the re-employment and rehabilitation of returning servicemen provides an excellent vehicle for reviewing all the steps involved in placement, medical follow-up, transfer, handling of problem cases, and methods of referring cases for specialized attention where this is indicated. In many instances this will involve sharing confidential medical information and close cooperation with a trained coordinator working in the personnel department. Excellent teaching material is already available from experiences with men who have returned from military service, and it is important that cumulative records of these experiences be kept in a confidential file. Foremen's opinions and methods of handling will naturally form a considerable part of such records. Although his work is seldom signified by that name, the good foreman must in effect be a psychotherapist, even if only on an amateur standing. Among other things, this means that he never uses rule-of-thumb procedures in handling individual contacts with his men, and that he aims to treat and prevent causes rather than symptoms of undesirable work habits and attitudes. Like psychiatrists, foremen are constantly faced with the need to boil down problem situations to ultimate elements, which can then be dealt with. Foremen realize that interest, ingenuity, and time are required to uncover the worker's inner emotional wants and needs, and to redirect his energies into mutually constructive channels. They are especially eager to learn brief interview techniques which will render their daily contacts more effective. While there will aways be a considerable number of employees who are in definite need of special psychiatric care, industry will never be able to provide enough psychiatrically trained physicians or other personnel to carry out the necessary therapy on an individual basis. A logical compromise approach is through increased training and use of foremen as therapists. The industrial psychiatrist can readily serve as a consultant to foremen, and can use the individual cases that are referred to him as teaching material in the training of foremen. In this way foremen can gain confidence in methods that are scientifically approved. Artificial and misleading distinctions between industrial and non-industrial causes of adjustment difficulties must be removed if understanding and therapy are to be truly effective. In his work with individual foremen, the industrial psychiatrist encourages them to formulate personality factors in their own words, and focuses attention on features of each situation that they can influence. Attentive, considerate listening and an atmosphere of objectivity must be demonstrated by the psychiatrist's own actions. Traits of interviewing employed in foreman contacts, can thus be caught by example. Sometimes it is feasible to carry out employee interviews in the foreman's own office, with him present in a joint consultation. Here the psychiatrist has a dual object of giving the worker an impartial hearing and at the same time demonstrating to the foreman a technique of interviewing that uncovers springs of motivation, then enlists the worker's active participation in the solution of his own problems. Quite often foremen who are impressed by the success of this method are frank in appealing for help in regard to their own personality problems. It goes without saying that the insight thus gained has a reciprocally beneficial effect both on the foreman's attitude and on his management of subsequent problem situations involving the human element. The development and application of such a pragmatic in-service psychotherapeutic training technique is a challenging, but virtually untouched front of industrial psychiatry. The tooling of psychiatric methods for effective use on the foreman's level is clearly one of the outstanding needs in the field of industrial human relations, and this need will certainly increase in the postwar period."

### Role of the Plant Physician

KENNETH E. MARKUSON, M.D., M.P.H., Director, Bureau of Industrial Hygiene, Michigan Department of Health, Lansing, "The Role of the Plant Physician in an Industrial Mental-Health Program," in *Mental Hygiene*, January, 1945, (29: 1, 110-113). Extract: "Selective Service Headquarters have reported that 1,160 Michigan men were discharged from military service during the month of March, bringing the total number of discharges in our state to 47,261 since Pearl Harbor. No doubt the monthly total will soon reach two or three times that number. It has been estimated by some authorities that 50% of the discharges are for neuropsychiatric reasons. These figures indicate the extent and severity of the problem, but they do not present the entire picture. Many of those now employed or those about to enter industrial employment for the first time will have difficulty in becoming satisfactorily adjusted to a new environment, involving contact with hundreds of fellow workers, continual supervision, and a maze of industrial machinery, with its incessant noise and demands for punctuality. While the problem of physical rehabilitation is huge, in most sections I believe it is being met satisfactorily. I do not believe that the same can be said of the rehabilitation of those mentally disabled, nor do I know of any extensive programs now in progress. DR. HIMLER and DR. EADIE have recently instituted such programs in two of the General Motors Corporation plants—programs that merit our attention and our



# WAR BOND MAN

## — CLASS OF '63

**Someday you'll want** to see that boy, or girl, of yours off to college . . . and *right now* is not too early to start making plans.

Maybe your youngster, like so many other American boys, will work his way through school . . . but even in that case you'll want to be in a position to give him a little help if he needs it.

**By what you put aside** in War Bonds *today* you can help *make sure* he gets the same chance as other boys, *tomorrow*.

Chances are you're already on the Payroll Savings Plan. Saving as you've never been able to save before. This is fine not only for you, but for your country—*provided you keep on saving.*

But take your dollars out of the fight —and you will be hurting yourself, your boy's future, and your country.

Buy all the bonds you possibly can. Try to get even more than you ever have before. And remember this . . .

**For every three dollars** you invest today, you get *four dollars back when your Bonds come due.* You, and your boy, can use those extra dollars.

*Make sure you get those Bonds! Hold on to them till they come due!*

praise. I am sure that other large concerns will also give serious consideration to the inclusion of psychiatry in their medical departments. But it will require much more than this to provide adequate mental-health programs for our workers, since over 60% are employed in plants with a population of less than 500, in which medical services are inadequate. Just how such a program can be developed for these small plants I do not know, but the problem certainly merits serious consideration and action by the American Psychiatric Association. In my opinion, psychiatry has been remiss in its approach to many of the difficulties that confront the medical profession today, particularly in industrial medicine. As I recall my medical curriculum, very little time was devoted to the mental diseases and practically all of that was devoted to the study of the frank insanities. We skipped merrily over the borderline cases or the psychoneuroses, which are so numerous and which present industry with a most serious problem. In this respect I should like to quote from one of your own school —Dr. George H. Preston, Commissioner of Mental Hygiene for the State of Maryland: 'Psychiatry suffers from words. Look at some of the words: schizophrenia, hypochondriacal, hebephrenia, masochism, pathergasias, psychosis, psychoneurotic, manic-depressive, psychoanalysis, dissociative dysmnesic disorders, narcissistic. These are beautiful words and, once you have mastered them, you can lead them around as pets. They serve much the same purpose as a vicious-looking bulldog. They prevent the intrusion of strangers into your private domain and they give you a feeling of security. I may know exactly what my terms mean, but unfortunately, when I use them, even among the fully initiated members of my own lodge, I can never be sure that the fellow members recognize them as meaning just what I think they mean. When I use them outside the lodge, they make me seem mysterious, and it is mystery which has done psychiatry harm in its contacts with the general public.' Psychiatry must find a way to meet on common ground with the medical profession, with industry and its associated employees, foremen, and personnel groups. The mental aspects of industrial medicine, safety, and absenteeism need developing. Interdepartmental and interpersonal relationships are fundamental in building good morale. The industrial physician should know a good deal about such developments and how to foster them. He should have a wide influence, and in order to be effective, he must have a practical knowledge of personality and its problems. The industrial physician is an important cog in plant procedure and his work has a direct bearing on production. Industrial medicine is aware of the many ways in which industrial mental health can effectively operate, but it needs practical guidance from the psychiatrist. In most areas I believe this guidance has been lacking, not due entirely to negligence on your part, but because the value of your services have not been recognized by industrial medicine as a whole. But now that they are recognized and are so badly needed, I trust that you will find a practical way to impart your knowledge and give assistance wherever needed. Industry is avid for your help, and our entire country will profit immeasurably by your deeds. This problem, as I see it, is not primarily a Federal problem or a state problem. It is a community problem. The boys who have given their services to our country in the line of duty are all local boys. They have left their homes from a thousand different communities and are now returning to those communities to take up life where they left off. Many will need help before they are able to resume a normal existence, and it is my opinion that the necessary assistance should come from their fellow citizens—from industry and labor, and, in so far as possible, the medical profession in that community should help each returned veteran to resume a normal and productive life. I trust that the psychiatrists will assume an important role in the organization of such services, wherever possible. In the smaller communities, where the services of a psychiatrist are unavailable, some provision should be made to supply consulting services to local industry. I am sure that we are all convinced that most labor turnover, absenteeism, and dissatisfaction among employees can be charged to a fairly small percentage of the total number of workers in any plant. Whether these maladjustments should be attributed to home or to plant conditions does not matter; the important thing is to determine the cause and thus decrease this tremendous loss in manpower. Many of these causes appear insignificant and, therefore, nothing is done about them. However, these little details, if neglected, build up and accumulate into insurmountable obstacles, and as a result thousands of workers either stay on the job badly maladjusted or hop from plant to plant, looking for a haven of retreat that does not exist and that will not exist until the underlying causes of discontent are discovered and corrected. It is here that the psychiatrist can best lend a helping hand."

## CURRENT ARTICLES

—*Continued from page 56.*

detected dullness. He had discovered a new method of obtaining accurate information about normal and abnormal conditions in the chest. For six years he and his assistants thumped chests, made notes of their findings, and verified their impressions at the autopsy table. Then, in the same year that Morgagni published De Sedibus, he sent to the printers his *Inventum Novum*, a 96-page treatise on percussion. Auenbrugger states: 'I am not moved to write by an itch for writing but by a desire to impart to my profession what I have discovered.' The book was brief. Van Swieten, his chief, had advised him to be brief if he had to write at all! But the *Inventum* was accurate and clear. Still, the author did not expect his contribution to be accepted by the high and mighty Van Swieten at the medical school, and why should the Baron learn from the son of a Gratzian innkeeper! Why should the great Van Swieten, pupil of the immortal Boerhave, who marched at the head of a mighty army of admirers through the wards at the Krankenhaus, listen to the peasant's son from Graz. So the medical army under Van Swieten continued to stamp through the wards at the Krankenhaus and to listen reverently to the baron's discussions on 'Heimweh.' The *Inventum Novum* 'fell flat.' The new part of cardiology, which Leopold Auenbrugger had lifted from the Sea of the Unknown, slowly and almost completely sank back from whence it came. For 40 years percussion remained an almost forgotten medical art. Yet there were persons at the Holy Trinity Hospital who did not quite forget what Auenbrugger had taught. One of these was Max Stahl, who left Vienna to seek greener pastures in Paris and brought the memory of the pompous Van Swieten, his medical ward army, and a copy of the *Inventum Novum* with him. When he observed that Corvisart was trying to develop real clinical courses at the Charite, he evidently told the great French cardiologist how clinics were conducted in Vienna. Corvisart liked the idea of a ward army and copied it. When Stahl heard Corvisart complain of his inability to make correct chest diagnosis, he handed him a copy of the *Inventum Novum*. The great French cardiologist liked the book, too. When Corvisart found that he could verify the statements made by Auenbrugger, he began to practice percussion on all his patients. One can imagine the impressive thumping of chests carried on by the medical army trailing after him through the wards. The thumping became the talk of the town. Even Napoleon heard about it; and when the General had a chest cold, Josephine sent for the thumper. From then on the two men were friends and buddies. During the first decade of the nineteenth century the College of France attained its 'Glanz' period. Strong progressive men dominated the various departments and by brilliance of intellect and diligence secured a name for themselves and glory for Parisian medicine. Young doctors from the old and the new world flocked to Paris. It was during that decade that Corvisart eloquently held forth on cardiac disorders and on the value of percussion to the admiring doctors who tramped with him through the wards at the Charite."

Chatham

# Silent Sentinel

KOAGAMIN parenteral blood coagulant is pyrogen-free and sterile. Rigid controls insure its purity and uniformity.

In surgery, hemorrhagic diseases, certain blood disorders and emergencies—in short, wherever capillary or venous bleeding is a problem, KOAGAMIN offers rapid and safe assistance.

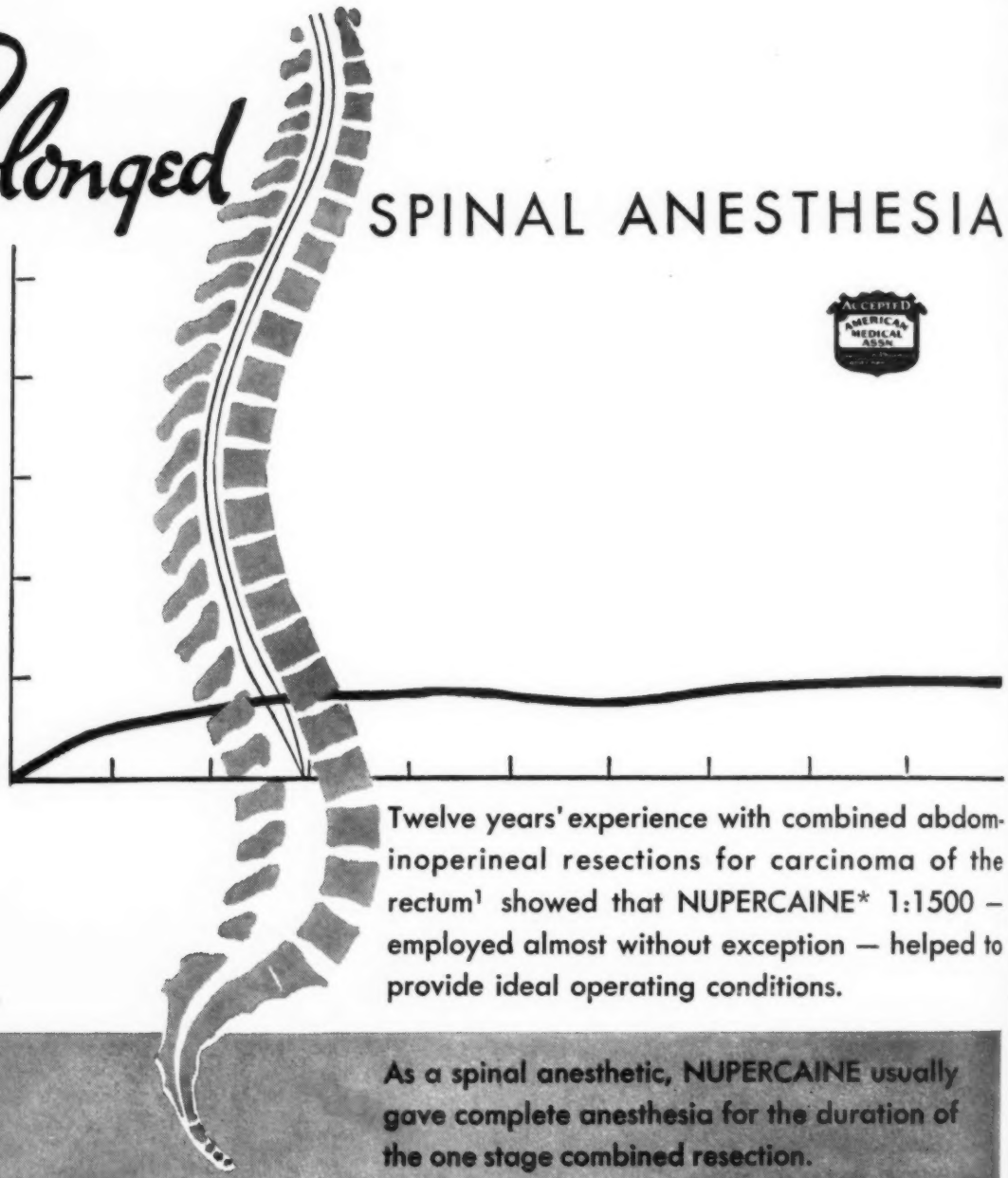
*Literature on request*

CHATHAM PHARMACEUTICALS, INC. • NEWARK 2, NEW JERSEY, U.S.A.

Distributed in Canada by FISHER & BURPE, LTD., Winnipeg, Manitoba

# *Prolonged* SPINAL ANESTHESIA

ACCEPTED AMERICAN MEDICAL ASSN



Twelve years' experience with combined abdominoperineal resections for carcinoma of the rectum[1] showed that NUPERCAINE* 1:1500 – employed almost without exception — helped to provide ideal operating conditions.

As a spinal anesthetic, NUPERCAINE usually gave complete anesthesia for the duration of the one stage combined resection.

# NUPERCAINE

an anesthetic with a wide field of usefulness

*a Ciba Product*

[1] Coller, F. A. and Ransom, H. K.: Carcinoma of the Rectum. Conclusions Based on 12 Years' Experience with Combined Abdominoperineal Resection. Surg., Gynec. & Obst., 78:304,1944.

* Trade Mark Reg. U.S. Pat. Off. Word "Nupercaine" identifies the product as alpha-butyloxy-cinchoninic acid—gamma-diethyl-ethylenediamide-hydrochloride.

CIBA PHARMACEUTICAL PRODUCTS, INC.
SUMMIT, NEW JERSEY
IN CANADA, CIBA COMPANY LIMITED, MONTREAL